

PSYCHOLOGICAL PROFILES AND INSTITUTION
EFFECTS PERTAINING TO INMATES INCARCERATED
UNDER THE INSANITY DEFENSE

By

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Four groups of violent offenders were compared on a variety of demographic and psychological test variables: thirty men who had been found not guilty by reason of insanity (NGRI); thirty men who had attempted the plea but were found guilty; thirty men who had the question of sanity raised in a psychological evaluation, but never used the plea; and thirty men matched on crime for whom the question of mental status had not been raised. Chi-square, multivariate analyses, and discriminant function statistics were applied to the data.

Subjects were grouped according to the role of their mental status in adjudication, residence, and crime. They were found to differ on the variables of heinousness of crime, and Sum C and Extended F+ on the Rorschach. The Rorschach was again upheld as

a sensitive instrument for detecting subtle differences between violent individuals.

A high degree of personality pathology was present across groups. Only the control group presented a clear-cut psychopathic picture; the other groups showed features of both psychosis and extremely uncontrolled, explosive acting out potential. Prediction equations were generated on the basis of the discriminating variables, but did not accurately distinguish between groups.

Data did support the hypothesis that there may be some crimes so heinous that the community will not sanction an NGRI plea, no matter how disturbed the perpetrator. Suggestions for future research, involving the development of a more sensitive crime severity scale and the inclusion of non-violent offenders in a replication study, were discussed.

CHAPTER ONE INTRODUCTION

The insanity defense has been a controversial feature of Anglo-American law since before the formulation of the M'Naughten Rule in 1843. "Criticism of the defense has been constant, starting with Queen Victoria's reaction to the original M'Naughten decision, much of it deriving, it seems from an impression that however 'right' it may be in theory it has too many 'wrong' results in practice" (Wright in NYDMH, 1978, p. 10). At that time, Daniel McNaughten, while laboring under a delusion, attempted to shoot England's Prime Minister Robert Peel, but instead accidentally killed his secretary. Public outcry naturally ensued, and McNaughten was indicted for murder. Three doctors who examined him indicated that his delusional system (involving his personal persecution by Tories in the government) had been present for over two years, and he was acquitted on grounds of insanity. Queen Victoria reportedly responded to this verdict by stating, "The law may be perfect, but how is it that whenever a case for its application arises, it proves to be of no avail?" (cited in Becker, 1973, p. 44). The judges involved in the case were called to answer for their decision before the House of Lords, and in the course of the questioning, came to formulate what is known today as the M'Naughten rule. "The Lords (and the newspapers) approved the judges' formulation, but the London Times presaged much

future comment by observing that it was difficult to reconcile 'with what took place at the late unfortunate trial'" (cited in Becker, 1973, p. 44).

Today there still appear to be problems existing in the translation of legal theory into practice. John Hinckley's attempted assassination of President Reagan has given renewed force to the arguments that favor the abolition of the insanity defense. "Now that Hinckley has been found Not Guilty By Reason of Insanity of a crime millions of citizens witnessed on television, can the king's justice survive such humiliation?" (Lykken, 1982, p. 13A). Emotional and reasoned treatises have appeared criticizing the defense for (among other things) allowing the guilty to go free (Yochelson and Samenow, 1976), discriminating against the poor and minority groups (Matthews, 1970), aiding mental health professionals in usurping the role of judge and jury (Dix, 1981), and releasing dangerous criminals to the streets after a short time in a hospital (Mesritz, 1976). Such treatises often examine philosophical issues, relying on a few well-publicized cases in which the insanity defense figured prominently. However, basing major policy decisions such as the abolition of the defense on consideration of a few hand-picked, notorious examples may not be an advantageous approach to a careful study of how the defense is functioning in the majority of cases. How often is the defense used, and who uses it? Are such people criminals, the retarded, or individuals out of touch with reality? What actually happens to those who succeed with the defense; and to those who fail?

Systematic, well-conducted research which addresses these questions is quite scarce in the literature. The current study examines the psychological and demographic characteristics of a group of ninety men who were involved with the defense between 1974 and 1978. The author had three major questions at the beginning of the research. The first concerned how those trying the defense appeared on psychological tests: did they resemble the criminal population as a whole, or were their test data more compatible with data seen in the population of the mentally ill? Another question related to those who used the insanity defense through trial but were found guilty and sent to prison: how, if at all, did this group differ from those who were found to be "insane"? The third area of concern focused on the examination of variables other than psychological functioning which could affect the insanity verdict: did the defense indeed discriminate against the poor, or were other factors such as the details of the individual crime affecting the adjudication?

Before these current research questions are addressed, it is necessary to review the literature pertaining to the insanity defense. Consideration of philosophical and legal aspects of the various tests for insanity, the mechanics of the defense, previous demographic research studies in the area, and the use of psychological tests with violent offenders provides background material on what is known and unknown about the functioning of the insanity defense in the United States.

CHAPTER TWO REVIEW OF THE LITERATURE

The Issue of Moral Responsibility

Historically, the issue involved in the use of the insanity defense has been one of moral blameworthiness: there existed a reluctance to assign the full measure of blame for an action against society if the accompanying intent or awareness of the act were not present. The legal term "mens rea" was translated as guilty mind or criminal intent (Johnson, 1975) and addressed the issue of whether the accused possessed the requisite intent to perpetrate the offense. Just as many people would avoid assigning moral responsibility for a crime to a child on the grounds that he/she were "below the age of reason," there exists a legal mechanism to allow society to avoid placing "guilt" or "blame" upon an adult who lacks the mental capacity to be morally aware of his/her actions and their consequences. Even in the time of Aristotle, "capacity for choice [was deemed] critical to the question of moral blameworthiness, and this capacity was lacking in animals, children, and insane persons" (Becker, 1973, p. 44). Thus, the label of "not guilty by reason of insanity" signifies that a person was not responsible for his/her actions at the time of the crime; and hence cannot be assigned blame or guilt for the act, since both require intent.

Legal Tests of Moral Responsibility

Translating this theory into practice has proved to be extremely difficult. There have been problems in the wording of legal definitions (or "tests") for insanity; not only in the M'Naughten standard, but also the later tests of Durham, irresistible impulse, and the American Law Institute (ALI) rule of the Model Penal Code. Table 1 presents the four legal tests for insanity. Operationally defining concepts of "mental capacity," "product of mental disease or defect," and "moral awareness" (among others) has proved to be controversial. Each version of the test seeks to correct problems encountered in its predecessor, yet similar difficulties are found in all.

The M'Naughten rule. The M'Naughten rule states that "the accused must have been laboring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing; or if he did know it, that he did not know that what he was doing was wrong" (common law). It is frequently called the "right-wrong" test, and has been criticized for its narrowness and for other definitional problems. "It is urged by many that the word 'know' as used in the formula be given a wider definition so that it means that kind of knowing that is relevant, i.e. realization or appreciation of the wrongfulness of seriously harming a human being" (Hall, cited in Johnson, 1975, p. 484). Partially as a result of such criticisms, the Durham rule was introduced as the new standard for the District of Columbia in 1954; and was heralded as correcting many of the flaws found in M'Naughten.

Table 1
"Tests" of Insanity

M'Naughten Rule (1843)

The accused must have been laboring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing; or if he did know it, that he did not know that what he was doing was wrong.

Irresistible impulse test

M'Naughten instructions plus:

To acquit by reason of insanity if they find the defendant had a mental disease which kept him from controlling his conduct. They are to do so even if they conclude that he knew what he was doing and that it was wrong.

Durham (1954)

Accused is not criminally responsible if his unlawful act is a product of mental disease or defect.

American Law Institute (ALI) Model Penal Code (Original Draft 1962)

A person is not responsible for criminal conduct if at the time of such conduct, as a result of mental disease or defect, he lacks the substantial capacity either to appreciate the criminality of his conduct or to conform his conduct to the requirements of the law.

The Durham rule. Unfortunately, the Durham rule wording that "an accused is not criminally responsible if his unlawful act is a product of mental disease or defect" (Durham v. US, 214 F 2d 862, DC Cir. 1954) proved to be far too broad. Almost any nervous or mental condition could be used by attorneys as relieving an individual of responsibility ("trial by label"), as long as mental health terminology and diagnostic criteria designated the pathology as a disease. Successful acquittals rose from 2% in 1954 (Johnson, 1975) to 13.8% in 1962 before the McDonald decision defined mental disease or defect as "any abnormal condition of the mind which substantially affects mental or emotional processes and substantially impairs behavioral controls" (Slowinski, 1982, p. 521). The percentage of successful acquittals then dropped to 5.9%. Overholser v. US provided additional stringency to Durham by excluding psychopathy or "anti-social personality" as a mental disease, thereby closing the loophole which had resulted in acquittal of a great number of habitual criminals. Bazelon reviews the end of the Durham experiment (it was replaced by the ALI rule in 1972) and concludes, "The Durham formulation gave the false impression that the question [of the causality of the act] required a medical or scientific answer. The ALI language could fare better, since it does not invite the expert witnesses to offer a flat and seemingly scientific answer that the impairment did or did not cause the act. It is clear that Durham focused the jury's attention on the wrong question--on the relationship between the act and the impairment rather than on the blameworthiness of the defendant's action by prevailing community standards" (Bazelon in Johnson, 1975, pp. 522-524).

The ALI rule. The optimism present at the inception of the Durham rule did not recur. Rather, although many legal experts felt that the American Law Institute (ALI) rule avoided the major problems found in M'Naughten and Durham (Johnson, 1975), they admitted that operational difficulties still remained.

The ALI rule states, "A person is not responsible for criminal conduct if at the time of such conduct, as a result of mental disease or defect, he lacks the substantial capacity either to appreciate the criminality of his conduct or to conform his conduct to the requirements of the law" (ALI Model Penal Code 4.01--Proposed Original Draft 1962). Many states also include a "caveat paragraph": a clause to the effect that habitual criminal conduct cannot be used as the sole criterion to constitute mental disease. Becker offers criticism that the ALI rule still lends itself to conclusory testimony by psychiatric experts, and that the moral issues inherent in the decision-making process may be obscured by the wording of the test. "The ALI test still contains magic words susceptible of being used, like those in Durham, to provide simple answers to the hard questions and obscure the underlying issues. The 'test question' aspect remains: cases will still be found out in terms of the doctor's answers to questions whether a particular state of mind is or is not a 'mental disease,' or even whether the defendant had 'substantial capacity'" (Becker, 1973, p. 64).

Use of the insanity tests. Given the concerns stated above that tests may be overused and misused, it is somewhat surprising that much research has not been conducted as to the effect of the language

of the individual test on the adjudication of guilt by judge or jury. However, most authors (Becker, 1973; Johnson, 1975) rely on the results of a study cited by Morris and Hawkins (1970):

The practical difference between traditional tests of insanity and modern revisions was recently empirically tested. Various juries were given instructions based on the M'Naughten rules, the Durham test, and the following simple and uncluttered formula: 'If you believe the defendant was insane at the time he committed the act of which he is accused, then you must find the defendant not guilty by reason of insanity.' The juries failed to see any operative differences in the three instructions. Do we need to labor another century and a half to produce a mouse of such inconsequence?
(cited in Johnson, 1975, p. 526)

Except for the period in the District of Columbia during which the sociopath (or "antisocial personality") could use his record of habitual criminal conduct as evidence of mental disease or defect under Durham, insanity acquittals have been successful in roughly 2% of criminal cases, regardless of the test applied (Johnson, 1975).

Table 2 presents a state-by-state analysis of which tests are used across jurisdictions as of the spring of 1982. As can be seen from the table, there is no single test for insanity that is being applied throughout the United States. M'Naughten, Durham (in New Hampshire), the ALI rule, and a combination of M'Naughten plus the irresistible impulse doctrine are used depending upon the preference of the legislature in a particular state. All federal courts have adopted the ALI rule, and there appears to be a trend across the states in the direction of abandoning M'Naughten in favor of the ALI rule as well. Recently, some legislatures have added the Guilty But Mentally Ill (GBMI) alternative to the options for dealing with

Table 2
 Insanity Tests Used Across States
 (as of spring 1982)

<u>State</u>	<u>Test(s)</u>
Federal	ALI
Alabama	M'Naughten plus irresistible impulse
Alaska	ALI
Arizona	M'Naughten
Arkansas	ALI
California	diminished capacity
Colorado	M'Naughten plus irresistible impulse
Connecticut	M'Naughten
Delaware	M'Naughten plus irresistible impulse
District of Columbia	ALI
Florida	M'Naughten
Georgia	M'Naughten
Hawaii	ALI
Idaho	none
Illinois	ALI plus GBMI
Indiana	ALI plus GBMI
Iowa	M'Naughten plus irresistible impulse
Kansas	M'Naughten
Kentucky	ALI
Louisiana	M'Naughten
Maine	ALI
Maryland	ALI
Massachusetts	ALI
Michigan	ALI plus GBMI
Minnesota	M'Naughten
Mississippi	M'Naughten
Missouri	ALI
Montana	mens rea
New Hampshire	Durham
Nevada	M'Naughten
New Jersey	M'Naughten
New Mexico	M'Naughten
New York	ALI
North Carolina	M'Naughten
North Dakota	M'Naughten
Ohio	M'Naughten
Oklahoma	M'Naughten
Oregon	ALI

Table 2--continued

<u>State</u>	<u>Test(s)</u>
Pennsylvania	M'Naughten
Rhode Island	ALI
South Carolina	M'Naughten
South Dakota	M'Naughten
Tennessee	ALI
Texas	M'Naughten
Utah	ALI
Vermont	ALI
Virginia	M'Naughten
Washington	M'Naughten
West Virginia	ALI
Wisconsin	ALI
Wyoming	ALI

(taken in part from Slowinski, 1982,
p. 524, note 65)

mentally ill clients (Slowinski, 1982). (See Proposed Alternatives to the Defense, below, for consideration of the GBMI rule.)

Most of the research on the mechanics of the insanity defense was conducted in New York and Wyoming, both of which were under the ALI standard at the time. The current research took place in Florida, which relies on the M'Naughten standard. Before examining how the defense is working in these three states, it is first necessary to understand the process by which a defendant is found insane, and criticisms of the way this process is currently operating.

Workings of the Insanity Defense

Evaluation

When the court requests an evaluation to assess the mental status of a defendant, there are usually two questions being asked of the mental health professional. One concerns whether the defendant was insane at the time of the crime (whether he meets the test criteria as set forth in the individual state's Rules of Criminal Procedure). The second question about which the court may seek an expert opinion is whether the defendant is competent to stand trial. The Supreme Court, in Dusky v. US, mandated the specifics involved in the issue of competency to stand trial. "It is not enough for the district judge to find that 'the defendant is oriented to time and place and has some recollection of events,' but that the test must be whether he has sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding--and whether he has a rational as well as factual understanding of the proceedings against him" (Roesch, 1979, p. 542).

Before the question of sanity can be brought before the court, an individual must first be found competent to stand trial. This is a legal safeguard for the defendant, insuring that he/she is in a state of mind which allows him/her to play as appropriate and alert a role in the proceedings as possible. However, the competency stage is also problematic in terms of operationalizing legal theory. Difficulties are briefly reviewed below. For a detailed consideration of the issues involved in competency to stand trial, the reader is referred to Henry Steadman's Beating the Rap (1979), a longitudinal study of those found incompetent to stand trial in New York State.

There exist problems in both defining and implementing procedures to handle those individuals found incompetent to stand trial. Roesch (1979) asserts that criteria for incompetency are poorly defined and that some professionals rely on clinical skills and personal definitions of incompetency rather than explicit criteria to decide who is competent. There have been frequent misinterpretations as to the type of decision the court is seeking: professionals may render opinions as to dangerousness, sanity, or whether the defendant has a psychiatric disorder while never addressing the issue of whether he/she can understand legal proceedings. Many states are currently including criteria for determining competency in the court order which is sent to the professional in an attempt to provide structure for the expert opinion.

It appears that true incompetency to stand trial is a comparatively rare phenomenon. The Harvard Press Manual of Competency to Stand Trial and Mental Illness, stipulates that "in 1971,

Bridgewater found that only six out of 501 observational admissions to be incompetent to stand trial. This is an accurate frequency based on our experiences in the courts" (1974, p. 65). They stress that far more people are labeled as incompetent to stand trial than actually lack the capacity to assist their attorney in their defense. This point of view is echoed by Yochelson and Samenow, who maintain that the incompetency plea is used to provide the defendant with "training" in feigning mental illness, and that few people are legitimately incompetent (1976). Boehnert (submitted for publication, 1982) raised the question that the court may be erring on the side of caution, finding many incompetent who may in fact be capable of participation in court, in the interest of protecting their legal due process rights.

After a defendant is found incompetent to stand trial for a felony, he/she is remanded to a secure mental health facility for treatment, which often involves antipsychotic medication. Staff at the treatment facility may also hold "competency classes" which teach the basic principles of courtroom procedure. Patients are then coached as to how to "pass" future competency examinations. Patients are evaluated for competency no less than every six months, usually by means of an oral or written test. When they are able to demonstrate acceptable understanding of the legal process, the court is so informed and they are returned to their original jurisdiction to stand trial. The process of "coaching competency" has come under fire from some professionals, who raise the question of whether simple recitation of courtroom procedure can be equated with the ability to participate "rationally and factually" in the proceedings against him/her.

Incompetency and insanity issues may be part of the same forensic evaluation: they are not synonymous legal concepts. It is possible for a defendant to be first found incompetent to stand trial and later be found sane at the time of the crime; or visa versa. There does appear to be a trend in some jurisdictions, however, for those deemed incompetent to stand trial to be more likely deemed "insane" than those lacking such a finding of incompetency (Boehnert, submitted for publication, 1982; Fosdal, 1979b). Fosdal (1979b) cautions that there is a strategic advantage in having "the defendant found incompetent to stand trial. It should be remembered that a finding of mental incompetency to stand trial is often a major factor in a successful plea of mental non-responsibility" (p. 46).

Thus, it is not surprising that in practice, the question of insanity/incompetency is usually raised by the defense attorney (NYDMH, 1978). The court is informed that an evaluation for incompetency/insanity at the time of the crime is deemed advisable. Counsel for the defense may provide the court with information as to why lack of responsibility is suspected, and the court may appoint an expert to perform an evaluation as to whether the defendant can assist his/her attorney and whether he/she meets insanity defense criteria. If the defendant is indigent, the court may also pay the fees for this expert.

Alternatives. If the report supports the use of the defense, the attorney may still attempt other avenues before filing a "Motion to Rely Upon the Defense of Insanity." Some defendants oppose having to admit guilt in order to use the defense. Others refuse to be

labeled as "insane," stigmatized as "mad and bad," or placed in a mental hospital for an indeterminate time period; especially if the crime is relatively minor and chances within the criminal justice system seem to suggest a quick parole from prison (Singer, 1980). In this case, an attorney may attempt a plea bargain with the prosecutor, or may use mental illness as a mitigating factor if the case goes to trial.

Filing of the "Motion of Intent." In certain cases, however, the defense attorney does opt to proceed with the defense and files a "motion of intent to rely upon the defense of insanity." Other experts are then called in to evaluate the defendant.

In relatively minor cases, the prosecution may agree to the plea of "not guilty by reason of insanity" (NGRI); the case then goes before a judge, both sides stipulate (agree), and the defendant may be found NGRI rather quickly. However, when the crime is a notorious or heinous one, and the prosecution is actively opposed to the idea of the defendant's being found "insane," a battle of the experts may ensue, with reputable mental health professionals aligned on opposing sides. It is this type of case with which the insanity defense is most closely associated in the mind of the public, and not the "minor crime" mentioned above (NYDMH, 1978; Steadman and Cocozza, 1974).

Judge or Jury as Trier of Fact. The insanity case may be presented before a judge or jury. Simon (1967) suggests that juries may frequently be quite reluctant to grant a verdict of NGRI, believing that 1) the defendant will quickly be released to the streets by the mental hospital; 2) that most juries are "too easy" and hence they should "make an example" of the defendant; or 3) that the defendant

is "guilty but mentally ill" and needs to accept both treatment and consequences for his/her actions. It appears that the supposition that juries are too lenient is an erroneous one. Rather, they are much more reluctant than judges to render a verdict of NGRI. This was supported by Boehnert (submitted for publication, 1982) who found that 29 out of 30 successful pleas were before a judge; but 24 out of 30 unsuccessful NGRI attempts were presented to a jury.

Consequences of a Plea. If an NGRI plea fails, the defendant is found guilty. At sentencing, the judge may take evidence of mental illness into consideration for mitigation of the severity of the sentence; but he/she may also impose a sentence based solely on legal statutes and details of the crime without heeding psychiatric input. In most cases, the defendant is then remanded to the custody of the Department of Corrections, not placed on probation. In Florida, the sentence may involve imposition of the death penalty; indeed, many of the Florida sample were to be found on Death Row.

If, however, a defendant is found to be not guilty by reason of insanity, he is remanded for treatment to institutions (usually maximum security) run by the state mental health agency. It must be stressed that legally NGRI's are considered to be "mentally ill," not responsible for their offense, and in need of placement in a treatment institution, not a prison. The maximum security units to which NGRI's are usually sent are not under the control of the corrections department and exist (at least on paper) to provide treatment. After the institution concludes that the NGRI has received

"maximum benefit from treatment," it informs the sentencing court to this effect. A hearing is then held (often by the sentencing judge) as to whether the NGRI still fits the dangerousness criteria (i.e. whether he is likely to be a danger to himself or others). If the judge is of the opinion that the NGRI does constitute a danger to the community, he/she will remand the defendant to the continued custody of the treatment facility on the basis of dangerousness, even though the facility has labelled him as being no longer in need of treatment. It should be noted that judges are far more willing to err on the side of safety, especially regarding an NGRI accused of a violent crime (Boehnert, submitted for publication, 1982; Stone, 1975). Goldstein conceptualizes the issues inherent in this final stage of the process as follows: "The critical issue is not so much that of commitment but that of release. The manner in which it is handled determines whether the commitment is entirely therapeutic, whether it is an elaborate mask for preventive detention, or whether it is an awkward accommodation of the two objectives" (Goldstein, 1967, p. 143).

Criticisms of the Insanity Defense

Definitions. As can be seen in the previous sections which examined the various tests for insanity, there have been many difficulties arising from attempts to operationalize the ambiguous language found in the statutes. Chief Justice Burger argues "no rule of law can possibly be sound or workable which is dependent on the terms of another discipline whose members are in profound

disagreement about what those terms mean" (in NYDMH, 1978, p. 12). Other definitional problems arise for those in the mental health professions. First, the term "insane" has no counterpart in psychiatric nomenclature. It is not equatable with "psychotic," "schizophrenic," or any other diagnostic label. Each case must thus be examined individually, and the expert must attempt to conceptualize mental disability and pathological behavior into a standard framed in the language of another discipline. This translation is often an extremely difficult process.

Role of the expert. Many of the criticisms concern various aspects of the role of the mental health professional in the proceedings. Dix (1981) voices concern that finders of fact often do not appear to give careful consideration to the legal complexities involved in an insanity case. "It seems clear that a major factor in this state of affairs is the continued domination of litigation by mental health professionals. Too often, these matters are resolved by uncritical acceptance of conclusory opinions rendered by mental health professionals" (1981, p. 2). It is the opinion of Dix and others (Halpern, 1977; NYDMH, 1978) that there exists a trend for the expert witness to usurp the role of the trier of fact in determining the defendant's knowledge of right from wrong.

The performance of the sanity evaluation itself is problematic. As part of this evaluation, the expert is asked to extrapolate backward to the time of the offense, often years prior to the time of evaluation, to estimate whether the accused's state of mind was such that he did not know or appreciate the nature, quality, and consequences of his act. In doing this, the professional is offering the

court his/her hypothesis of the events surrounding the crime: there exists no scientific method of extrapolation which would allow even the most skilled practitioner to inform the court of what actually happened during the period in question. Furthermore, conducting an examination around the issues raised in the legal tests for insanity is once removed from psychiatric training which is designed to concentrate on mental illness and on giving treatment to a patient, not a litigant.

Abrams (1979) goes so far as to assert that "given present so-called definitions of mental illness are based on behavioral patterns . . . it is impossible to show a causal connection between a 'mental illness' and a crime" (1979, p. 441). She reasons that no specific cause has been found for most of the major psychiatric illnesses (hence the label of "functional") and therefore classification and diagnosis rest on description of behavioral patterns common to each illness. In her opinion, it is a personal and not a scientific opinion which is used in determining which "patterns" are more pathological than others, and which if any relieves a defendant of responsibility. She argues that given the state of the art for psychiatric diagnosis, "cause" of a mental illness does not exist and hence there is a "noncontingent relationship between insanity or mental illness and non-responsibility" (1979, p. 450).

Halpern, a psychiatrist, voices similar concern that psychiatric measurement is not exact enough to be able to define the point at which mental disease or defect can relieve a defendant of responsibility (1977). He also asserts that "there is no morally sound

basis to select a mental disease or defect as a justification for exculpability while excluding other behavioral determinants, such as heredity, poverty, family environment, and cultural deprivation" (1977, p. 400). In fact, these issues are often presented in comprehensive reports to the court concerning the mental condition of the defendant, and serve to inform the reader about the individual before the court: who he is, how he thinks, and how he came to be accused of the crime (Hoffman, 1981).

Other professionals, especially those in psychiatry and psychology, voice concern that the "battle of the experts" degrades the image of the profession itself. This assertion is certainly not a new one, as Smith points out in his quote from an 1855 insanity defense proceeding. "This trial has presented the painful and humiliating spectacle of mental pathologists differing entirely in their judgment" (Bucknill, 1855 in Smith, 1980, pp. 18-19). This issue is also linked to the notion of the "expert for hire"--a professional suspected of changing his/her testimony and opinion to support whichever side will pay the fee. "The professional posture of the specialty is debased as the public realizes the conflicting testimony of several members may have been perverted through the promise of a fee for services rendered" (Kolb, in NYDMH, 1978, p. 103). Others admit that within a specialty which currently lacks the scientific precision of, for example, ballistics, differences of opinion are expected and provide useful alternative conceptualizations to the trier of fact (Hoffman, 1981).

Client rights. Such are the concerns involving the role of the professional in the insanity defense. Other criticisms of the tests for moral responsibility involve client rights. A professional consideration linked to the public image of mental patients in general is expressed when the publicity surrounding a notorious insanity case is considered. "Mental illness, violent criminal behavior, and exculpation from criminal responsibility are predominantly linked in the consciousness of the public as a result of such an unfortunate case" (Cavanaugh and Rogers, 1982, p. 538).

Another concern involves the concept of "equality under the law." In considering the possibility that the defense discriminates against the poor, Matthews (1970) argues that often the most qualified professionals from either law or psychiatry are not involved in insanity cases, for reasons of ethics or finances. He suggests that for indigent defendants unable to hire a private attorney or a team of fully credentialled experts, the court may appoint a public defender and experts who may be second-rate, giving only a cursory examination and having a narrow definition of mental illness which biases them for the prosecution. The more wealthy, on the other hand, can bring in private attorneys well-versed in tactics and well-respected experts who have taken the time to understand legal concepts and can impress juries with their vitae, opinions, and delivery. Steadman (1978), while acknowledging that such discrimination may occur in a few cases, has not found a widespread bias operating against the poor in his comprehensive New York State study of the

demographics involved in the defense. Pasewark (1979) criticizes the suspicion held by many attorneys that state hospital evaluations are less than complete or are biased toward the prosecution, and instead praises the competence and comprehensiveness of such court-ordered examinations. It thus appears that later studies have not supported Matthews' allegations of a widespread bias operating in the application of the insanity defense.

Goldstein and Katz (cited in Abrams, 1979) question whether the defense is "designed to authorize the holding of persons who have committed no crime" (p. 451). Although found not guilty, the defendant is not released to the community but is instead classified in an alternate way to facilitate detainment. This position is somewhat similar to the more extreme point of view of Szasz, who asserts that society will always be able to invent ways to detain and abridge the freedom of those for whom it harbors fear and distrust (cited in NYDMH, 1978).

Protection of society. The final criticisms of the defense surround the issue of the protection of society. There is a sense of outrage on the part of some that the label of "not guilty" (for whatever reason) conveys to the public that certain people are above the law. Some opponents go so far as to state that the defense damages "the national or state conscience or superego" (Kolb in NYDMH, 1978, p. 95) and exacerbates a "breakdown or contempt for the law amongst the young who interpret hypocrisy in those sworn to uphold it" (p. 94).

Others doubt the ability of the mental health professionals to recognize the malingerers and conniving criminals from among those

trying the defense. As support for this view that the insanity defense is a device whereby the "guilty" can escape their deserved punishment is the viewpoint presented by the authors of The Criminal Personality. Yochelson and Samenow (1976) see the use of the defense as a strategic maneuver on the part of a very aware criminal. "He concludes, 'Why serve a ten year prison term when I can get out of the hospital in a much shorter time?' . . . We must emphasize that not one of the hospital records contains a valid account of what has really occurred. Institution records . . . all contain the lies and self-serving stories that the criminals have fed to their examiners in attempting to be judged mentally ill" (pp. 225-235). This concern is echoed by Halpern, as he focuses on the careers of those who "made a point of trying to fool psychiatrists and psychologists in Florida, Texas, Maryland, New York, California, and Canada . . ." (1977, p. 47).

Not only do these opinions involve anger at the idea of justice being thwarted: more indirectly they are concerned with the seeming incapacity of the hospital or receiving facility to manage adequately such a defendant, a viewpoint echoed by others less extreme in their opinions (Cavanaugh and Rogers, 1982; Dix, 1981; Steadman in NYDMH, 1978). Legislators (Pasewark, 1979a) and the public alike fear that after a few years of "treatment" in institutions with questionable success rates, the NGRI's will return to the streets, uncured, and be a danger once more.

No longer the remote asylums for containing a grab-bag of misfits, deviants and vagabonds and no longer defacto alternatives to prisons and poor houses, state hospitals today are enjoined by law to provide highly specific treatment plans for patients who are found to need in-patient care and treatment. The advent of psychotropic medication and the concomitant changing nature of psychiatric hospitalization have resulted in drastically reducing the length of stays in state psychiatric centers. Increasingly characterized by open atmospheres rather than locked wards, psychiatric centers today are no longer appropriate facilities for the containment of social deviants. (Prevost, in NYDMH, 1978, p. 3)

By the time a defendant is competent to stand trial, he may no longer be appropriate for in-patient care. Staff may inform the court to this effect, and the court may well recommend continued residence at the hospital on grounds of dangerousness to others.

At this stage, several problems are present. First, at many hospitals, facilities are not designed nor are staff trained with security as a primary focus. Second, "apart from [staff] perceiving themselves as being forced to hold people, without treatment of the need for it, who are more properly the responsibility of other agencies of society, a more cogent difficulty is that these patients must be managed contrary to all the best tenets of professional ethics" (Wright, in NYDMH, 1978, p. 116). Third is the central difficulty inherent in the use of the term "dangerousness" as a guide to release. Research is consistent and definite that mental health professionals cannot accurately predict a low base rate, complex behavior such as dangerousness (Monahan and Cummings, 1974; Monahan, 1978, 1982; NYDMH, 1978; Steadman and Coccozza, 1974). Thus, the judge is dependent upon mental health professionals for an opinion which if rendered "borders on

committing professional perjury" (Wright, in NYDMH, 1978, p. 116). This inability to predict dangerousness means that the final step of the NGRI process, release, is impossible to implement with any degree of assurance that the defendant is no longer a risk to his/her community.

Proposed Alternatives to the Defense

Given the large number of criticisms of the insanity defense as it stands now, it is not surprising that many alternatives have been proposed. It is also not surprising that the alternatives themselves appear to have serious problems when put into practice.

Abolition of the defense. Some states (notably Idaho) have experimented with abolishing the defense altogether (Lykken, 1982), since there is no constitutional mandate that a state must utilize a test for criminal responsibility. In that state, the judge is permitted to consider testimony as to mental illness and recommendations for treatment in deciding on sentencing after a defendant has been found guilty. Aside from the theoretical debate over the merits of totally removing the defense as an option, there exists some question as to whether the judge and the defendant would be recipients of quality psychiatric opinion and evaluation respectively, if there exists no formal mechanism to ensure such professional competency (Lykken, 1982).

Bifurcated trial. Other states (Florida and California, among them) have experimented with the system of the bifurcated trial. The reaction in both states was quite negative (Carnahan in NYDMH, 1978; Lykken, 1982) to this procedure in which "the question of what happened is decided in stage one, while the question of insanity is threshed out

by an adversarial process before the same jury in stage two" (Lykken, 1982, p. 13A). Criticisms range from concern with the duplication of effort involved in presenting much of the same information at two separate times in the same trial; to the assertion that the issues of guilt and mental condition are not separable and therefore should not be considered in separate trial procedures (Carnahan, in NYDMH, 1978). Furthermore, "what sometimes happens is that the jury hears in part two of an insanity trial what they should have heard in part one. But by then it is too late and the degree of homicide has already been determined" (Fosdal, 1979a, p. 17).

Diminished capacity. In 1978, the government of New York State appointed a panel of legal and mental health professionals to study how the defense was working in practice in that state and to offer to the governor alternatives to the insanity defense, if necessary. The panel's recommendation was that New York adopt the rule of diminished capacity, in which "evidence of abnormal mental condition would be admissible to affect the degree of crime for which the accused could be convicted. Specifically, those offenses requiring intent or knowledge could be reduced to lesser included offenses requiring only recklessness or criminal negligence" (Carnahan in NYDMH, 1978, p. 140). Under this rule, a mental health professional's testimony is limited to the defendant's capacity for culpable conduct. The result is that the defendant's mental state is taken into account in the judge's determination of degree of offense and length of sentence. The panel stresses that such an alternative is possible in New York because that state has the most "advanced model for mental health treatment

in prisons in the United States" (NYDMH, 1978, p. 10). Facilities include evaluation, group therapy, a day hospital, regular out-patient services, and the more traditional in-patient hospitalization for chronic illness. The corrections system model is presented as having the intention of providing the same quality of care as a community-based mental health center.

Although flaws are not mentioned in the New York panel's recommendation of the diminished capacity model, they do exist. First, mental health professionals are not trained in the determination of "culpability" (another legal term) any more than they are trained in assessment of moral responsibility. Second, it is likely that the adoption of the diminished capacity rule will lead to a dramatic increase in the number of defendants invoking the question of mental capacity in some form, to add to an already over-crowded judicial system. "At the time of offense, only a small minority of offenders, in my opinion, are mentally ill as compared to the large number of offenders who demonstrate some degree of mental impairment of diminished capacity" (Fosdal, 1979a, p. 20). A variety of "mental impairments" and psychiatric diagnoses can be used to negate capacity and intent, far more than can qualify as completely absolving someone of moral responsibility for his/her actions. Third, much has been written on the unenviable role of the mental health professional in the prison system (Bazelon, 1977a; Reid, 1982). Allegations are frequently made that the psychiatrist's role is more that of an agent of coercion who keeps order by over-medicating patients, rather than that of a legitimate physician. At the very least, pressures to employees exist in any

institution which exists for social control, to assist in the goals of the organization: namely, to help fellow employees keep order. Given the difficulty in philosophically integrating treatment programs with institutions designed for punishment, and considering events such as the riots over conditions in the New York prison system in the 1970's, and the more recent accusations of Abbott (1981), there is justification for questioning whether New York State has been able to put into practice its "model" mental health care system in the prisons within the space of a few years.

"Guilty but Mentally Ill." One of the most publicized alternatives is Michigan's "Guilty but Mentally Ill" rule. In 1974, Michigan released sixty-four inmates who had been previously committed under the NGRI statute, on the basis that they were currently sane. Less than a year later, two of them had committed additional violent crimes. Mesritz (1976) directly attributes the formulation of Michigan's "Guilty but Mentally Ill" (GBMI) rule to these crimes. This rule is important in that it is serving as a model for other states which are unhappy with the performance of the standard insanity defense.

The GBMI statute states, "A defendant may be found GBMI if the trier of fact determines beyond a reasonable doubt that the defendant is guilty of an offense, was mentally ill at the time he committed the offense, but was not legally insane at the time he committed the offense" (Grostick, 1978, p. 189). If found GBMI, he/she is remanded to the custody of the department of corrections. If treatment is deemed necessary, the inmate receives it within prison

or is temporarily transferred to a treatment facility, to be returned to prison following treatment to serve the remainder of his sentence.

Criticisms of the rule are broad and varied. First, the consequences to the defendant convicted under the GBMI rule or a guilty plea are essentially the same. The rule seeks to insure that convicted GBMI defendants receive necessary treatment. Unfortunately, most observers agree that treatment is non-existent in prison, and that in sentencing a defendant to prison for treatment, the court is sentencing them to a condition that does not exist (Steadman, 1980).

In addition, it singles out offenders for stigmatization within the confines of the prison system. Many defendants dread entering prison with a label of "crazy," due to their expectation of differential treatment from both fellow inmates and staff (Singer, 1980). Due to this and the "legal hollowness" of the GBMI plea, some lawyers assert that "the act of a defense counsel advising his client to plead GBMI would constitute ineffective assistance, and a breach of a canonized ethical duty" (Schwartz, 1975, cited in Carnahan, in NYDMH, 1978, p. 139).

Furthermore, some legal experts (Grostick, 1978) argue that jury confusion caused by similarity in the GBMI and NGRI rules will result in GBMI verdicts for some defendants who actually are more appropriately deemed legally insane, thus depriving those individuals of their right to the use of the insanity defense.

It appears that no alternatives to the insanity defense exist which do not contain their own type of grave philosophical or practical flaws. Of concern is the current trend toward abandoning the

defense entirely in favor of one of the above alternatives, without adequate appreciation of their deficiencies and full comprehension of the mechanics of the current system.

Philosophical Considerations in Practice

Current studies can be classified into two types: those examining a broad set of persons classified as both mentally ill and violent; and those examining a subset of the above group who were found not guilty by reason of insanity. Examples of the former are investigations which examine dangerousness of mental patients as a whole (Rabkin, 1979) and which attempt to discover a relationship between psychiatric diagnosis and criminality (Guze, 1976; Piotrowski, 1978; Siomopoulos, 1978; Sosowsky, 1980). Examples of the latter include recent investigations in New York and Wyoming centering around statistical descriptions of NGRI defendants, the course of their hospitalizations, and how they compare with defendants found NGRI in the early 1970's (Pasewark, 1979, 1980; Singer, 1978; Steadman, 1974, 1980). Findings are reviewed here to provide a background for the description of the current study of NGRI's in Florida.

Arrest rates of mental patients in general: composition of the patient group. Due to the increased use of the mental health system as an alternative to the criminal justice avenue, far more individuals with prior arrest records are being hospitalized. This process is termed "the medicalization of behavior" and involves "defining deviant behavior as illness and mandating or licensing physicians to treat it" (Melick, 1979, p. 228). The group of mental patients as a whole now contains a "disproportionate share of people with police

records" (Rabkin, 1979, p. 26). The inclusion of this subgroup in the wider group of mental health patients is partially responsible for the statistics which indicate that patients as a group are more likely to be arrested, especially for crimes of violence. Other contributing factors to the increased arrest rates being quoted for psychiatric patients concern the changing admission policies for patients. There have been a decrease in the admission of geriatric patients to state psychiatric centers and an increase in the admission of the persons found incompetent to stand trial and the emergency commitment patients: i.e. those admitted for being a danger to self or others (Melick, 1979).

Rabkin's investigation poses an increasingly frequent question: what is the association between arrest risk and diagnostic category? She asserts, "When patients with arrest histories, primary diagnoses of substance abuse, and personality disorders are considered separately, the remainder of the patient group appears to be less dangerous than are those members of the general public who are not mentally ill" (1979, p. 26).

Relationship between arrest rate and diagnosis: high risk groups. Most researchers agree that personality disorders as a classification group have disproportionately high arrest rates (Binns, 1969; Guze, 1976; Henn, 1977; Rabkin, 1979; Siomopoulos, 1978; Zitrin, 1976). Another population of interest to emerge is that comprised of those adults who as children and adolescents were admitted to in-patient psychiatric wards for manifesting aggressive and disturbed behaviors. Since Robins' (1966) landmark longitudinal study, which yielded

rather pessimistic results as to the prognosis of such aggressive youngsters, there has been the demand for more long-term follow-up studies. Faretra (1981) presents results on an eighteen-year follow-up of psychiatrically disturbed and violent adolescents admitted to the children's unit of Creedmoor Hospital in 1960. The study suggests the following trends. First, although the antisocial subjects continued to be responsible for multiple crimes throughout the eighteen years of the study, there exists no consistent relationship between the acts for which they were originally hospitalized and subsequent acts. Second, the earlier the age at which antisocial behavior begins in a child's life, the greater likelihood exists that such a pattern will continue. As a group, those with enduring antisocial behavior "were almost all boys, had the longest preadmission history of childhood problems, showed the most unstable, variable, and aggressive behavior in the hospital, with antisocial and behavioral disturbances predominating as chief complaints, rather than psychiatric symptomatology. Their family background contained more antisocial histories and one-parent homes . . . " (Faretra, 1981, pp. 451-452). Third, there exists a close relationship between the reason for the subject's original hospitalization and subsequent life course. Those admitted with psychiatric symptoms continued to have mainly mental hygiene contacts throughout their lives. Those admitted with predominantly antisocial behavior were mainly associated with the courts and the corrections system. Those showing both bizarre behavior and antisocial behavior most resembled those found in the corrections group, although their histories reveal contacts with both the criminal justice and the mental health systems.

Fourth, "most of the children . . . with the longest duration of problems prior to admission (over two years) showed a life course of mixed antisocial and psychiatric problems" (Faretra, 1981, p. 448).

Faretra's conclusions support those of Robins (1966) and suggest a rather consistent relationship between early acting out (or conduct disorder) and later criminality. Data from England are slightly more encouraging. West (1980) asserts that the majority of young delinquents are treatable and eventually are subsumed into ordinary society. Those who are not, who continue in antisocial careers, appear to match the chronic aggressive recidivists found in Faretra's sample. "The most important features are poor control of hedonistic and aggressive impulses, low frustration tolerance, primitive conscience, instability in personal relationships and poor performance in education and work career, usually traceable back to an undisciplined and socially deprived childhood" (West, 1980, p. 624).

Relationship between arrest rate and diagnosis: schizophrenia.

Evidence becomes less consistent regarding the criminal activity of schizophrenics. In studies which feature schizophrenics as less than half of the patient sample, their arrests are not disproportionately high (Rabkin, 1979; Zitrin, 1976). Zitrin (1976) found schizophrenics to be over-represented among those who committed violent crimes but not over-represented in overall arrest rates. Sosowsky's (1980) sample includes a greater concentration of young schizophrenic patients than did others', with his research concluding that "patients who entered the hospital without a criminal record were subsequently arrested about three times as often as the average citizen and five times as often for violent crimes" (1980, p. 1604). Similarly,

Giovannoni and Gurel (1967) found with a sample diagnosed chronic schizophrenic that the subjects' arrest rates were far higher than the control population's with respect to violent crimes. With the change in the composition of state mental hospitals now a reality, Steadman concludes "it seems time to acknowledge that there may be a kernel of accuracy in the public's perception of the mentally ill as threatening and dangerous if arrest rates greater than those of the general population are assumed to indicate dangerous behavior" (1981, p. 314).

The preceding studies offer a broad overview of what categories are contributing to the image of the mental patient as a dangerous individual. There exists a much smaller body of knowledge as to characteristics of those who are evaluated upon being accused of crimes; and even fewer studies pertaining specifically to those using the insanity defense.

Characteristics of those referred for pretrial evaluation: the referral process. After a defendant is charged with a crime, there exist ample opportunities for a pretrial psychiatric or psychological evaluation to be requested. The defense and state attorneys are those most frequently involved in such a request. Usually some basis must be provided to the court for raising the question of mental illness. This can range from bizarre details of the crime itself, to reports of "peculiar" behavior on the part of the defendant from jailers, to the defendant's having a history of previous psychiatric hospitalization. As explained previously, if the court feels that an evaluation for insanity or incompetency to stand trial is justified,,

it may move for the appointment of experts to see the defendant.
(There also may be experts called by the state and by the defense.)

When patterns of referral over the years are examined, Henn (1976) and Binns (1969) note that the insanity defense is more likely to be considered in cases involving serious crimes, a common finding throughout the literature. In addition, in their samples the court seemed to be erring on the cautious side in its requests for pretrial evaluation, making it probable that most if not all of those accused of a crime and suffering from a serious psychiatric illness would be examined. (Their studies were conducted in major urban areas, however; and this conclusion may not apply to small rural counties). Steadman and Cocozza (1978) also note a tendency by some referral sources to believe that one must be crazy to be repetitively violent or to commit a crime such as murder. This attitude undoubtedly accounts for some referrals for evaluation, especially when more serious crimes are involved.

Characteristics of referrals: demographic data. Much data have been generated by the Forensic Division of the Malcolm Bliss Mental Health Center in St. Louis (Guze, 1978; Henn, 1976; Piotrowski, 1978). These researchers cite the trend of an increasing number of black male defendants between the ages of twenty and twenty-four being referred for sanity and competency evaluations. Since 1952, there have been a steady increase in the numbers of those charged with homicide and assault being referred to the service and a decrease in those who have committed less violent crimes.

Characteristics of referrals: psychiatric diagnoses. In examining diagnostic trends across the years, the St. Louis Forensic

Forensic Division notes the following patterns. First, the proportion of defendants being labeled antisocial personality is double the next most common diagnosis. Second, there has been a rise in the number of referred cases in which no mental disorder was found but which in the past would have been labeled as homosexual or passive-aggressive personality. Third, sixteen percent of the defendants are diagnosed as having schizophrenia of some type (Henn, 1976).

Piotrowski (1978) asserts that a major determinant of referral for evaluation is a history of prior hospitalizations in the history of the defendant. Eighty-two percent of those seen in the Bliss Center had such an incident in their records. He examined the diagnoses of those deemed psychotic in his sample and concluded that "schizophrenia or bipolar affective disorder uncomplicated by [secondary diagnoses of antisocial personality, alcoholism, or drug dependence] appear to be infrequent among criminals [no more than two percent] , including those suspected of psychiatric illness" (1978, p. 311). In his sample, eighty percent of the defendants were found to manifest antisocial personality, alcoholism, or drug addiction. He found no relationship between index crime and diagnosis.

This extremely low estimate (two percent) of those in the criminal population who suffer from a major psychotic disorder is disputed by other researchers. Siomopoulos (1976) examined 451 males in Cook County, Illinois, who had been found unfit to stand trial. Most were young, black, and had prior hospitalizations. A full seventy-seven percent were diagnosed schizophrenic, with only eight percent being seen as personality disorders. Type of crime committed did not differ from that of the St. Louis sample nor was type of

crime related to diagnosis. He acknowledges that the differences in findings may be due to research settings (hospital post-hearing vs. pretrial detention). However, Binns (1969) examined a sample of pretrial referrals and found one-third to be suffering from a major psychosis, and one-tenth to be personality disorders (n=96). Of the thirty-seven seen as psychotic, thirty-three percent displayed florid symptoms which disappeared following the administration of a course of medication. It is obvious from these discrepancies across studies that there is serious disagreement as to the representation of the schizophrenic or bipolar affective disorders within the criminal population.

Statistical descriptions of NGRI's. Unfortunately, there is very little research existing which explores how the insanity defense has been functioning. Pasewark (1981), in his review of existing literature, asserts that "it was shocking to determine the extreme paucity of information regarding a legal mechanism that has been operative for centuries. . . . This situation seems particularly deplorable during a period in which the plea is subject to intense criticism by persons seeking to either substantially alter or abolish the plea" (1981, pp. 357, 394). No national data have been collected. There exist no records containing such basic statistics as how many people across the country attempt the defense each year. Fundamental information (how often the defense is attempted, the percentage of successful acquittals, and demographic data such as sex, age, and race of those using the defense) has been published for only three states: New York, Wyoming, and to a lesser extent, New Jersey. Thus,

most of what is known about the workings of the defense comes from these few studies; the work of Steadman, Pasewark, and Singer. These research projects provide basic demographic information on the operation of the defense in those states in specified years. They do not begin to investigate more complex issues, such as psychological characteristics of the defendants, and the relationship of crime characteristics to acquittals. Pasewark summarizes, stating "the situation is all the more deplorable because, at this stage of the game, research designed to generate basic, useful information in this area generally costs little. . . . Needed data are already available in existing files, or if not, require only systematized, relatively simple means of collection, organization, and analysis" (1981, p. 394).

The following studies were conducted in states relying on the ALI rule at the time of the research. As stated previously, the slight difference in wording among the tests is not likely to alter to a significant degree who is found insane and who is not (Becker, 1973). Therefore, regardless of the version of the insanity test used, results of research cited here are assumed to be at least somewhat descriptive of other defendants in other jurisdictions.

Frequency of the use of the defense. Pasewark (1979a) and Steadman (1980) compared insanity acquittals in New York State from 1965 through 1978. Probably the strongest finding is the dramatic increase in the number of acquittals since 1971. Between 1965 and 1971, there were 53 successful pleas in New York; this is in sharp relief to the 225 successful pleas between 1971 and 1976, and 109 between 1976 and 1978.

In examining statistics on frequency of insanity acquittals in Wyoming between 1975 and 1977, Pasewark (1980) discovered that only 2.2 percent of the original ninety-two preliminary insanity pleas were actually adjudicated NGRI. This corresponds well to Johnson's estimate of two percent of pleas which were successful (1975). Seventy-four percent in Pasewark's sample dropped the intention and pled to a lesser charge, or were found guilty. This lends further support to the evidence that the insanity case carried all the way through trial is quite a rare phenomenon.

Insanity acquittals: demographic data. With respect to type of crime and the characteristics of the defendants, the demographics have not changed significantly over the last ten years in the New York sample. Eighty-seven percent are men, and thirteen percent are women; whites are over-represented in comparison to the state prison population, with sixty percent white compared to thirty-one percent black. Fifty-six percent of acquittees had previous psychiatric hospitalizations; and forty-four percent had prior arrest records. In examining distribution of crimes, authors note that fifty-three percent of those found NGRI were charged with murder or attempted murder: this is still far less than is assumed by the public. Assault of some form was the second most frequent crime represented, with about fifteen percent of defendants having such a charge. Steadman (1980) found wide variations in the number of acquittals across counties in New York. Thirty-five percent of the counties had not had a single successful insanity plea in twelve years: however, there are no consistently shared demographic factors of these counties. Some

are urban, some rural, some quite populated, others not. The author concluded that "the application of the insanity statutes depends more on the idiosyncracies of attorneys, prosecutors, and judges than on the number of the people in the county" (Steadman, 1980, p. 323). Another factor which may be linked to the frequency of the use of the insanity defense is the rate of arrest and indictment within a certain county. Pasewark (1979b) asserts that the more "brisk" the operation of the justice system in a county, the less likely the plea of insanity (a slow-moving process) is to be entered.

Attorney perceptions of the defense. In another study conducted in Wyoming, Pasewark and Craig (1980) examined attorney perceptions of the defense, and when these professionals used it with their clients. They discovered that attorneys have some of the same misconceptions as do lay people about the use of the defense. They tend to over-estimate how often it is actually used, to suspect that psychological evaluations occurring at state hospitals are less than thorough, and to believe that any individual who commits a violent or sexual crime must be mentally abnormal. Although attorneys admitted occasionally to using the defense as a delaying tactic to allow community furor over the crime to die down, most stated that they entered the plea due to reasons of their client's mental health. Desire to obtain treatment for the client, current bizarre behavior, and past history of client psychiatric hospitalization were the most frequent reasons cited for attempting the defense.

Psychiatric diagnoses of acquittees. In examining psychiatric diagnoses given to acquittees, Pasewark found that sixty-nine percent entered the hospital with predominantly psychotic diagnoses, and eleven percent were seen as personality disorders. "Of the 155 persons categorized psychotic, 128 were schizophrenic and 80 of those were of a paranoid type" (1979a p. 658).

Length of hospitalization of acquittees. Once within the hospital, length of stay did not seem related to severity of offense. However, the recent acquittees seemed to be held for a longer period of time than the earlier group. "The 97 acquittees from the 1976-1978 group who remained hospitalized had been retained for almost as long as the average length of stay of the 131 released patients from the 1965-1976 group" (Steadman, 1980, p. 323). He concluded that today, NGRI's can expect to stay in the hospital for at least four years. However, he cautions that it is misleading to compare the length of hospitalization with the time served in prison by those charged with the same crime, as this ignores the process of plea bargaining which takes care of about ninety percent of the cases processed through the criminal justice system. After comparing the hospitalization time of the acquittees with prison time served by those convicted (through plea bargaining and accrual of gain time), Steadman asserts that the two groups are quite similar in the amount of incarceration time which they actually serve.

Conclusions. Pasewark (1979a) summarizes the trends in the statistical data by conceptualizing those acquitted by reason of insanity as falling into two groups. The first group is comprised of those for whom the defense was designed; i.e. those whose

criminal actions arise as a result of their mental disorder. The second group, containing many individuals with a prior arrest record, is more representative of the criminal population as a whole which, "like any other occupational group, contains a certain number of mentally ill individuals" (1979a, p. 658). Steadman (in NYDMH, 1978) adds four subgroups of NGRI acquittees who he asserts are neither psychotic nor legally insane: former police officers, mothers charged with infanticide, "persons of respectability," and those he labels as "I-can-feel-sorry-for-you" subjects. The existence of these subgroups leads Steadman to question whether more "humane" variables than language of a given statute may be the deciding factors in insanity acquittals (NYDMH, 1978).

Recidivism studies. Recidivism studies which focus exclusively on NGRI's are comparatively rare. One (Morrow and Peterson, 1966) examines recidivism rates for California NGRI's, and finds that "the NGRI criminal recidivism rate of thirty-seven percent is almost identical with the prison rate" (1966, p. 34). Subjects were more likely to fail if they had two or more previous offenses, or if their criminal record included property crimes. The authors conclude that NGRI's show great similarity to discharged prison inmates with respect to nearly identical criminal recidivism rates, dominance of property crimes, and common prognostic variables. As a corollary to this, they suggest a dis-similarity between NGRI's and psychiatric patients due to the lack of a prognostic relationship between outcome and diagnosis or previous hospitalizations. Mullen and Reinehr (1981), in a study comparing population characteristics of a prison, a general psychiatric hospital, and a maximum security

forensic psychiatric facility (housing NGRI's, among others) reach a different conclusion from Morrow and Peterson (1966). Mullen and Reinehr suggest that forensic patients resemble general psychiatric patients more closely than they do prisoners, on IQ and demographic variables. (This is not a recidivism study, however, as it was conducted during the confinement period of each of the three groups.)

Psychological Characteristics of Violent Individuals

The previous sections have considered those individuals who meet criteria for being both mentally ill and violent. Studies have centered around diagnostic and demographic descriptions of those being evaluated in forensic settings, hospitals, and mental health centers. However, these studies do not focus on psychological descriptions of those who are violent or who habitually act out in an antisocial manner. Instead, they focus on investigating small subgroups of the entire population of acting out individuals as a whole. The main reason for this specificity is that "the criminal personality" does not exist as a single entity: there is no single description or diagnosis which encompasses all of the individuals who act out against society. In addition, there is no biological, physical, or psychiatric quality which consistently identifies such individuals and sets them apart as being qualitatively "different" from other people.

The criminal personality. This lack of an identifying trait or "mark" is not completely accepted in the literature. Both philosophical and early medical tracts advanced the notion that criminals are genetically different from others, and that their behavior is

untreatable and unalterable (Lombroso in Yochelson and Samenow, 1976). Others maintained that criminals possessed a "general constitutional inferiority," which resulted in "the dregs of every population draught, pure or mixed [being] poured into the prison sinks" (Hooten, cited in Yochelson and Samenow, 1976, p. 58). More scientific investigations have posited physical body type, genetic predisposition, chromosomal anomalies, certain autonomic responses, specific head trauma, and abnormal electrical activity in the brain as discriminating criminals from their fellows (Blackburn, 1975, 1979; Cloninger, 1978; Cochrane, 1975; Coursey, 1979; Curran, 1978; Shagoury, 1971; Yochelson and Samenow, 1976). To date, none of the biological theories have reliably and consistently discriminated chronically antisocial individuals from others, though investigations of genetic and autonomic factors are continuing.

There have also been attempts in the psychiatric literature to describe these individuals. The term CPI (constitutional psychopathic inferior) and the similar label of psychopath have frequently been used to identify "the criminal personality." Described by Cleckley in *The Mask of Sanity* (1954), the psychopath or sociopath is conceptualized as a person who may outwardly appear much like others (hence the title), but who in reality is quite different and quite psychologically disturbed.

"Despite changes in official terminology, there has been considerable agreement on how to describe these persons whose irresponsibility and antisocial attitudes are so well known" (Yochelson and Samenow, 1976, p. 90). The literature is consistent as to

characteristics which psychopaths share. Such individuals are described as immature, irresponsible sensation-seekers who do not profit from experience or learn from their mistakes. They are insincere, manipulative, skilled liars who appear unable to experience guilt. Chronically self-centered, they are adept at using others for their own ends but seem incapable of maintaining more than superficial relationships with other people. They lack control over their impulses and are often chronically in trouble with the law. Unfortunately, such people are often charming, socially poised, and lacking in anxiety and initially can make quite a good impression socially. They are capable of being extremely destructive, violent, and vengeful and can create a great deal of physical and psychic damage to other people with little or no regret for their actions (Cleckley, 1954). Cleckley used the term "moral insanity" to conceptualize their inability to empathize with others, experience guilt, or respond to internal ethical standards.

In the Diagnostic and Statistical Manual (Third Edition) or DSM-III (the 1980 national classification system for the nervous and mental disorders), the terms "psychopath" and "sociopath" are abandoned for the more recent label of "antisocial personality." As can be seen from the criteria presented in Table 3, many of Cleckley's characteristics of the psychopath have been incorporated into DSM-III's "antisocial personality."

Although many of those in prisons for both violent and non-violent offenses possess some of the identifying characteristics, there appears to be a continuum comprised of the criteria on which

Table 3

Diagnostic Criteria for Antisocial Personality Disorder

A. Current age at least eighteen.

B. Onset before age fifteen as indicated by a history of three or more of the following before that age:

- 1) truancy (positive if it amounted to at least five days per year for at least two years, not including the last year of school)
- 2) expulsion or suspension from school for misbehavior
- 3) delinquency (arrested or referred to juvenile court because of behavior)
- 4) running away from home overnight at least twice while living in parental or parental surrogate home
- 5) persistent lying
- 6) repeated sexual intercourse in a casual relationship
- 7) repeated drunkenness or substance abuse
- 8) thefts
- 9) vandalism
- 10) school grades markedly below expectations in relation to estimated or known IQ (may have resulted in repeating a year)
- 11) chronic violations of rules at home and/or at school (other than truancy)
- 12) initiation of fights.

C. At least four of the following manifestations of the disorder since age eighteen:

- 1) inability to sustain consistent work behavior, as indicated by any of the following: a) too frequent job changes (e.g. three or more jobs in five years not accounted for by nature of job or economic or seasonal fluctuation), b) significant unemployment (e.g. six months or more in five years when expected to work), c) serious absenteeism from work (e.g. average three days or more of lateness or absence per month), d) walking off several jobs without other jobs in sight.

(Note: similar behavior in an academic setting during the last few years of school may substitute for this criterion in individuals who by reason of their age or circumstances have not had an opportunity to demonstrate occupational adjustment).

- 2) lack of ability to function as a responsible parent as evidenced by one or more of the following: a) child's malnutrition, b) child's illness resulting from lack of minimal hygiene standards, c) failure to obtain medical care for a seriously ill child, d) child's dependence on neighbors or nonresident relatives for food and shelter, e) failure to arrange for a caretaker for a child under six when parent is away from home, f) repeated squandering, on personal items, of money required for household necessities.

- 3) failure to accept social norms with respect to lawful behavior, as indicated by any of the following: repeated thefts, illegal occupation (pimping, prostitution, fencing, selling drugs), multiple arrests, a felony conviction.

Table 3--continued

4) inability to maintain enduring attachment to a sexual partner as indicated by two or more divorces and/or separations (whether legally married or not), desertion of spouse, promiscuity (ten or more sexual partners within one year)

5) irritability and aggressiveness as indicated by repeated physical fights or assault (not required by one's job or to defend someone or oneself), including spouse or child beating

6) failure to honor financial obligations, as indicated by repeated defaulting on debts, failure to provide child support, failure to support other dependents on a regular basis

7) failure to plan ahead, or impulsivity, as indicated by traveling from place to place without a prearranged job or clear goal for the period of travel or clear idea about when the travel would terminate, or lack of a fixed address for a month or more

8) disregard for the truth as indicated by repeated lying, use of aliases, "conning" others for personal gain

9) recklessness, as indicated by driving while intoxicated or recurrent speeding.

D. A pattern of continuous antisocial behavior in which the rights of others are violated, with no intervening period of at least five years without antisocial behavior between age fifteen and the present time (except when the individual was bedridden or confined to a hospital or penal institution).

E. Antisocial behavior is not due to either Severe Mental Retardation, Schizophrenia, or manic episodes.

(from Diagnostic and Statistical Manual,
Third Edition, 1980, pp. 320-321)

antisocial and normal individuals fall. Some may resemble the "classical psychopath," fulfilling most of the characteristics as seen in the enduring pattern of their behavior. Others may evidence psychopathic qualities, yet not to the extent pictured by Cleckley previously. Still others may not resemble chronically antisocial individuals in the least but instead appear more compatible with those mentally ill individuals suffering from one of the major psychoses: schizophrenia or major affective disorder. These types of pathology may result in disturbance of a person's emotional and thought processes to the extent that he/she is no longer in basic contact with reality. The patient may hear voices, believe he/she is God or an agent of God, or invent and believe in an entire system which bears no resemblance to the outside world. (For a full review of symptomatology for psychiatric illnesses, the reader is referred to DSM-III or a textbook of abnormal psychology). Such individuals are usually not criminals and are in no way involved in antisocial activity during their lives. Some may commit violent acts while psychotic but still not display a pattern of criminality in their overall behavior.

Finally, such disorders may be superimposed on a basically antisocial personality style. These disorders include substance abuse and chronic drug psychosis in addition to schizophrenia and the major affective disorders. (For a more complete explanation of these disorders, the reader is referred to an abnormal psychology text.) There are serious implications inherent in the problem of an individual with multiple psychiatric difficulties. The first concerns treatment. A person may show many antisocial personality characteristics while also

displaying psychotic symptomatology. This may be in the form of hearing voices, forming delusions, over- or mis-interpreting stimuli in the environment as being threatening or harmful, believing in plots against him/her, etc. Medication may eradicate some or all of the above symptoms: it does not affect the psychopathic personality traits discussed previously. In fact, there is no known treatment which works well in ameliorating habitual criminal behavior (Cleckley, 1954; Farettra, 1981; Yochelson and Samenow, 1976). The second problem is a diagnostic one: such an individual is not easily classified with either the label of mentally ill or criminal. He/she is most likely both. He/she may present very different psychological pictures depending upon the time of the evaluation, and sanity examinations focusing on a past event in the life of such an individual may be quite difficult. Finally, disposition of an antisocial individual who is intermittently psychotic can be complicated. Treatment in a hospital may be indicated during the period when he/she is acutely delusional; once antipsychotic medication has been effective, a prison may be a more appropriate placement. At either facility, the individual is "neither fish nor fowl": in need of structure and security in a hospital and stigmatized, feared, and mistrusted as "crazy" in a prison.

Theories which posit biological or psychological abnormality as the root of criminality have been briefly discussed above. There exists a different conceptualization for antisocial behavior which places greater emphasis on environmental factors. Child abuse, poverty, slum dwelling conditions, exposure to familial and peer violence, and respect for the delinquent subculture have been asserted as contributing

to an individual's criminal behavior. Others have viewed violent behavior as being the natural product of a society that is also violent (Yochelson and Samenow, 1976). These theories focus not on the flaws in the individual, but instead blame society and the environment for causing conditions which breed crime. They do not address why the great majority of persons raised under deprived or violent conditions do not become antisocial.

Recent research asserts that persons who commit violent crimes display different personality characteristics from persons who commit property crimes (Rose and Bitter, 1980; Shagoury, 1971). This distinction between violent and nonviolent offenders is maintained throughout the literature (Edinger, 1979; Steadman, 1980; Toch, 1980; Wagner, 1979). Those involved in violence are described as being more impulsive, immature, emotionally uncontrolled, overly sensitive, distrustful of their environment as a whole, interpersonally isolated, and unable to express anger appropriately (Rose and Bitter, 1980). Shagoury (1971), in a study comparing a group of men convicted of murder with a group convicted of property crimes, found more personality disorganization, impulsivity, and less remorse and empathy in the homicide group but also stressed that this group was not a homogenous one, being comprised of four types of murderers. An earlier study (Wolfgang and Ferracutti, 1967) evaluated personality research regarding homicide. They concluded that there is no one personality profile of a homicide offender, and that murderous behavior occurs across all psychiatric diagnoses, including those who had been labeled as normal. Nor do these data appear to pertain just to murderers.

Violent offenders in general appear to resemble each other more than they do non-violent offenders; discrimination according to the type of violent crime which they commit has not been achieved (Rose and Bitter, 1980). Thus, murderers are not distinguishable from assailants or rapists purely on the basis of their personality characteristics. This is not surprising given that violence is not a psychiatric concept: it is a complex phenomenon resulting from the interaction of situational factors and personality dynamics of the individuals involved. Research investigating violence, and the related field of victimology (the study of those who become victims) has been poorly conducted (Toch, 1980; Wolfgang and Ferracutti, 1967) and fairly scarce. Toch (1980) addresses the difficulties inherent in making progress toward understanding and conceptualizing violence in the following way:

Offender subpopulations contain an unknown number of individuals who can be diagnosed as psychiatrically disturbed. However, even where such diagnoses are defensible, this does not mean that we have either explained violence or understood it. A schizophrenic who assaults people is psychotic and is violence-prone. Both facts may diminish the person's popularity, but the combination does not make him a violent psychotic. If the patient obeys voices that tell him to kill, our understanding increases by considering this fact, but in most cases the link between behavior and cognitive problems is remote. (p. 649)

The reader is referred to the work of Monahan (1978 and 1982) and Monahan and Cummings (1974) for a more thorough consideration of the issue of prediction of violence and dangerousness.

Summary. In summary, it appears that there is no single psychiatric entity known as a criminal personality or a violent offender. Violence is a multifaceted, partially situational phenomenon which occurs across psychiatric diagnoses. Offenders can be classified as being violent or nonviolent; they cannot be psychologically discriminated on the basis of the type of crime which they have committed. Violent offenders in general have been characterized as immature, emotionally uncontrolled individuals who lack appropriate empathy for others and view their environment with distrust. It must be stressed, however, that many of those committing violent acts do not fulfill all or even most of these criteria nor could they be termed "psychopathic" or "antisocial personality." Research in the area has been criticized for numerous philosophical and methodological problems but has illustrated that the problem of violence in general is a multidisciplinary one (not just a psychological one); and that violent offenders, while often resembling each other psychiatrically in certain ways, are not a homogenous group.

Use of Psychological Tests with Violent Offenders

In the course of a psychological evaluation, the clinician often reviews data from previous hospital and prison contacts, school records, and any medical and social history records of the defendant from other sources which may be available. The psychologist also conducts a clinical interview with the defendant, and administers a battery of psychological tests. During the clinical interview, the clinician may form diagnostic impressions based on both verbal and nonverbal information which is provided by the client.

Psychological tests provide data which serve to strengthen or call into question this emerging diagnostic impression. In some cases, the tests may replicate material already covered in interview; however, they also provide valuable information as to how the client approaches structured and unstructured situations and how he/she is functioning intellectually and emotionally. Many clients are less sure of how to make a "good impression" on tests than in interview; therefore, psychological tests may be useful in working with manipulative individuals. In addition, these assessment instruments were standardized on a wide range of normal (and in some cases, mentally disturbed) individuals; scores provide data as to how the defendant is performing as compared to the performance of certain specified criterion groups. The current research employed a battery of tests commonly used in psychological evaluations.

Intellectual. In forensic evaluations, both intellectual and personality tests are administered to the defendant. The intelligence test (sometimes known as an IQ test) provides information as to the client's level of general cognitive functioning at the time of testing. In the current study, IQ was used primarily for screening purposes to ascertain whether subjects were able to comprehend items on other tests.

Personality measures in general. Personality measures are generally grouped as objective or projective tests. An objective test is a structured test, both in terms of the type of item with which the client is presented and in terms of the scoring and interpretation by the examiner. On such a test, there is a limited range of possible answers, and a standardized scoring system and interpretive manual. A

projective measure, on the other hand, has no right or wrong answers, as it presents the client with a deliberately ambiguous stimulus to which he/she must respond. Scoring and interpretation of the responses follow basic guidelines but are subject to individual differences across examiners. The test battery used in the current study contained one objective personality test (the Minnesota Multiphasic Personality Inventory or the MMPI) and three projective personality tests (the Rorschach Inkblot Test, the Hand Test, and projective drawings). A brief description of each test is presented, followed by a review of the use of the test with violent offenders.

MMPI (the Minnesota Multiphasic Personality Inventory). The MMPI is currently the most widely used and researched objective personality inventory (Greene, 1980). It consists of 550 declarative statements written in the first person singular, to which the person taking the MMPI answers "True" or "False." Sample items include "I have used alcohol excessively," "There are persons who are trying to steal my thoughts and ideas," "I liked school" and "I am afraid of losing my mind." The 550 responses are scored and grouped according to ten clinical scales assessing major categories of abnormal behavior. In addition, three "validity scales" built into the test assess the respondent's test-taking style.

The MMPI was developed in 1940 at the University of Minnesota by Starke Hathaway and J. C. McKinley. They first assembled over one thousand items from psychiatric textbooks, other personality inventories, and clinical experience, to provide a variety of personality

descriptions. They reduced the thousand to about five hundred items which they arbitrarily classified into twenty-five categories. These MMPI categories included Morale, General Health, Gastro-Intestinal, Habits, Family and Marital, Phobias, and Obsessive-Compulsive (Greene, 1980). They then constructed a series of scales which could be used to diagnose deviant behavior.

In selecting items for a specific scale (e.g. Hypochondriasis), they used an empirical approach. The items had to be answered differently by the criterion group (e.g. hypochondriacal patients) as compared with normal groups. Since their approach was strictly empirical and no theoretical rationale was posited as the basis for accepting or rejecting items on a specific scale, it is not always possible to discern why a particular item distinguishes the criterion group from normal groups. Rather, items were selected solely because the criterion group answered them differently from other groups. (Greene, 1980, p. 5)

Each of the ten criterion groups consisted roughly of fifty individuals meeting the diagnostic criteria for the particular scale in question. (Scales are as follows: Hypochondriasis, Depression, Hysteria, Psychopathic Deviate, Masculinity-Femininity, Paranoia, Psychasthenia, Schizophrenia, Mania, Introversion). The normative group (that group serving as the reference for determining the standard MMPI profile) consisted of 1508 whites who were representative of the Minnesota population in the last 1930's for age (16-55), sex, and marital status. Whites were used for the normative sample because of the scarcity of minority groups other than American Indian in Minnesota at that time. Not surprisingly, this lack of a representative non-white normative sample is a major criticism of

the MMPI, as the test is frequently administered to individuals for whom no comparable original normative data exist. Recent research which interpreted profiles of blacks according to both white and (recent) black group norms, concludes, " . . . although black-white differences on the MMPI are statistically significant, they have limited clinical implications because of the small mean differences. Inspections of the standard deviation for each scale reported . . . also suggests that the distribution of scores are very similar for blacks and whites" (Greene, 1980, p. 215).

In addition to the ten clinical scales, Hathaway and McKinley included three validity scales to assess the honesty with which the testee responded to the MMPI. There exist several ways in which a person taking a test may deviate from total frankness. A person may answer totally randomly, exaggerate the depth of his/her psychopathology ("faking bad"), deny behavior or abnormality ("faking good"), or be unable for some reason to comprehend the items. The L, F, and K scales were developed to indicate when such response styles were operating, and "subsequent research indicated that both validity scale patterns and clinical scale patterns were useful in this kind of discrimination" (Butcher, 1969, p. 10).

Thus, the MMPI provides a profile which graphically depicts the frequency with which the testee endorses items which are related to various dimensions of psychopathology. Elevations and depressions on this profile sheet (see Figures I-III) provide a "profile pattern" or "code type," often consisting of the highest one, two or three-point elevations. MMPI manuals and computer programs exist

which provide interpretation of the various code types and depict what behavior patterns and personality traits may be associated with a particular code.

Certain codes have been asserted to be characteristic of acting-out individuals in general. One of these, the "4-9" type, is said to be the profile achieved by the classic psychopath. Stelmachers (cited in Lachar, 1974, p. 88) describes an individual with a 4-9 profile as follows:

Persons with such profiles are generally impulsive and irresponsible in their behavior, and are untrustworthy, shallow and superficial in their relationships to others. They typically have easy morals; they are selfish and pleasure-seeking. Many temporarily create a favorable impression because they are internally comfortable and free from inhibiting anxiety, worry, and guilt but are actually quite deficient in their role-taking ability. Their judgment is notably poor and they do not seem to learn from past experiences. They lack the ability to postpone gratification of their desires and therefore have difficulty in any enterprise requiring sustained effort.

Another profile asserted to be found frequently in the population of violent offenders is the "4-8," with elevations on Scale 4 (Psychopathic Deviate) and Scale 8 (Schizophrenia). Individuals with such a pattern may be characterized in the following manner. "These individuals are unpredictable, peculiar in action and thought. They straddle the fence between character disorder and psychosis . . . and bizarre self-defeating crimes are noted. These individuals often do things that seem designed so that they will get caught; the crimes are stupid and sometimes vicious and assaultive" (Stelmachers, cited in Lachar, 1974, p. 84).

There have been other MMPI profiles as well which have been "in vogue" for a time as being characteristic of the criminal population as a whole. However, all the profiles are suggestive of other forms of pathology as well. They serve as a suggestion, not as a predictor of behavior, as many individuals with such code types have no criminal background whatsoever.

Some researchers, such as Megargee, have tried to construct their own scales based on MMPI items which are more sensitive to violent individuals as a whole. In general, however, these scales suffer from methodological, constructional, and replication problems. Hundreds of specialized scales exist for use in conjunction with the MMPI, but few are supported in subsequent research with different or larger samples (Butcher, 1978).

Another approach maintains that a linear combination of MMPI variables distinguishes sociopathic, psychotic, and neurotic profiles more accurately than does a clinical appraisal of the configurations (Goldberg, 1968, 1972). Goldberg asserts "virtually perfect separation of group profiles . . . the results ranging from 93 percent correct (psychotic vs. neurotic) to 99 percent correct (psychiatric vs. sociopathic)" (1972, p. 121). Along similar lines are studies "summing" different scale T-scores to yield a valid measure of aggression (Huesmann and Lefkowitz, 1978). These authors added T-scores for scales F, 4, and 9 and found that "the composite was an excellent discriminator between delinquent and general populations of males" (1978, p. 1071); and that this composite demonstrated a higher reliability than simple use of the component scales. However, in a failure to replicate this conclusion, Holland (1981) found that the

"combination of F, Pd, and Ma performed no better than Pd alone" (1981, p. 106). This study also contradicts findings of Heilbrun (1979) which had shown that differentiation between violent and non-violent offenders could be increased by combining personality and intelligence measures. Holland (1981) found the relation of intelligence and psychopathy to be linear and additive, rather than interactive. He concludes that "illegal behavior, especially violent aggression, is related to situational, sociocultural, and physiological determinants as well as the enduring characteristics of individual offenders. . . . It therefore seems unlikely that measures of the type under consideration contain the potential for highly accurate discrimination or prediction of criminal violence . . . [and] neither the Huseman index nor Heilbrun's (1979) hypothesis regarding the interaction of intelligence and psychopathy appears to be an exception to this generalization" (1981, p. 110).

Megargee (1977) has gone so far as to construct an entire prisoner classification system based on an MMPI taxonomy. He argues that within his system, those having similar MMPI profiles are also similar with respect to other psychological and demographic variables. His research generated ten statistically derived and differentiated "types" which "differ substantially in their behavior, social histories, life styles, and personality patterns" (1977, p. 149). The importance of this research stems from its use of a correctional population as a base to generate descriptions of criminals who manifest certain MMPI patterns. His typology is being used more frequently in recent MMPI literature that deals specifically with offenders or violent individuals (Edinger, 1979; Wuinsey, 1980).

Problems encountered in the use of the MMPI with offenders.

Because of the ease of its administration and scoring, the MMPI is especially popular as an instrument with institutionalized populations. However, as noted above, it was designed to measure a broad range of personality characteristics within a broad range of individuals. Although felons were included as the criterion group for the Psychopathic Deviate scale (Scale 4), the test was not developed strictly for use with this diagnostic subgroup.

Butcher and Tellegen (1978) and Reppuci (1978) point out that the MMPI was not standardized on criminal populations, was not designed specifically to be sensitive to nuances in violent individuals, and does not have scales or norms which correspond directly to the correctional population being studied. Questions continue to be raised concerning the sensitivity of its validity indicators and the implications of the failures in replication for studies attempting to find a "violent profile" of MMPI scales (Holland, 1981).

The Rorschach Inkblot Test. The Rorschach Inkblot Test is one of the most widely used projective psychological techniques. A "projective test" offers a subject a nebulous stimulus (one lacking clear right or wrong answers); theoretically the subject "projects" aspects of his/her personality onto the stimulus in his/her responses to the test. Exner hypothesizes that "the test response reflects the basic psychological styles or response tendencies that have developed within the personality, plus representations of the more private world of the person" (1980, p. 563).

The Rorschach technique was formally introduced by Hermann Rorschach in 1921. The test consists of ten inkblots, five of which are

achromatic (black and white) and five of which are colored. They are presented to the subject in a standardized order, and responses to each card are noted verbatim on a response sheet by the examiner. A subject may have as many responses as he/she wishes to each card, although between two and three responses per card is a characteristic number for a normal subject of average intelligence (Ogdon, 1977). After the initial presentation of the ten cards (the "free association" period) the examiner shows them again to the subject in order, this time asking standardized questions pertaining to details of the subject's perceptions. This is termed the "inquiry," and such questioning often yields information as to which qualities of the blot (form, location, movement, and color among others) the subject was responding. These qualities, termed determinants, are scored according to rules set down in a scoring system. Through developments in the Rorschach technique, many such systems have been devised in order to increase the accuracy and breadth of information provided by the test: the original ten blots themselves have not been changed. Research is inconsistent as to the relative merits of one scoring system over another (Exner, 1980), with practitioners often incorporating elements of one or more systems into their analysis of determinants. Such lack of standardization of scoring practices across examiners has been a major criticism of the Rorschach technique.

The major determinants will be briefly reviewed here, and the reader is referred to Klopfer and Davidson (1962) for a complete explanation of the scoring system used in the current research.

Determinant analysis. In the Klopfer scoring system, there exist several determinants which are seen as being significant indicators of the manner in which a subject structures his/her world. Location refers to the part of the blot being used for the percept: does the subject focus on the whole, or concentrate on spaces, or on large or small details? "Location usage appears to be related more closely to intelligence rather than to emotional or personality factors" (Ogden, 1977, p. 39).

Human movement responses (symbolized by "M") "are believed to provide pertinent information, especially regarding ego strength and insight, and attitudes toward oneself and others . . . " (Ogden, 1977, p. 23). Animal movement responses (symbolized by "FM") are hypothesized to be representative of more primitive, less mature modes of behavior. Impulsivity and the potential for acting out are hypothetical correlates of a high FM score. Inanimate movement responses (symbolized by "m") typically reflect anxiety or tension with respect to the subject's perception of his environment.

Subjects may also respond to the coloring of the blot. Shading responses may yield information as to how the person copes with anxiety produced by his environment. Chromatic responses (symbolized by "FC," "CF," and "C") are hypothesized to "reflect the individual's responsiveness to emotional stimuli in his environment" (Ogden, 1977, p. 32). This emotional reactivity may be controlled (as seen in percepts such as "a red peony flower" which utilize form as well as color) or relatively uncontrolled (seen in "pure color" responses or those which do not place a high degree of form on the concept, such as

"blood.") Sum C is the weighted sum of color responses, derived from the formula

$$\frac{FC + 2CF + 3C}{2}$$

which yields a single score quantifying the number and use of form in color responses.

The most frequently encountered type of Rorschach response is a pure form, or "F" response. It is a measure of the "fit" between concept and inkblot and is frequently interpreted as suggesting the degree of reality contact which a subject may possess and the extent to which he/she pays attention to the environment. These responses may be of positive form level (the percept conforming well to the objective features of the blot) or of negative form level (the percept poorly relating to the objective characteristics of the stimulus). Form level is expressed by the "F+%" score, with higher scores suggesting better reality testing. The "Extended F+%" score measures the form level of all responses, including those which do not use F or "pure form" as the major determinant. The Extended F+% score is another indicator of reality testing.

The examiner evaluates Rorschach perceptions through the determinant analysis (which provides quantitative information as to the distribution of various scores) and a content analysis (focusing on qualitative perceptions linked to tone, interests, and values). In content analysis, percepts are analyzed according to the psychodynamic interpretation of the symbolism attached to various percepts. For instance, the percept of "a spider" would be interpreted far differently than the image of "a happy woman" given for the same part

of the blot. Again, the reader is referred to Klopfer and Davidson (1962) for a more detailed introduction to content analysis.

Summary. In summary, the Rorschach has been used frequently as part of a standard psychological battery to detect underlying psychosis and to provide a measure of ego development and emotional control. It was designed to provide a clinical description of the subject's personality characteristics, including those facets of which the subject may be unaware. "A person's outward, observable behavior may often not reveal his true feelings and attitudes. In the Rorschach situation, on the other hand, a person does not know the correct way, the best way, or the typical way to respond. He must react in his own particular fashion. In so responding, he unwittingly or unconsciously reveals himself" (Klopfer and Davidson, 1962, p. 15).

Use of the Rorschach with violent offenders. The test has been widely used with correctional populations, in the hope that it may provide more subtle clinical information than may be gained from the MMPI. Researchers maintain its diagnostic usefulness in distinguishing violent from nonviolent individuals (Finney, 1955; Rose and Bitter, 1980; Sommer and Sommer, 1958; Stormont and Finney, 1953; and Towbin, 1959). In addition, some experts have devised a "Destructive Content Scale" using a five-category system, combined with Color Content scores (Rose and Bitter, 1980), which they assert distinguishes between hospital patients who will reoffend in a violent way upon release and those who will not. Scores range from a "1" for no violent content (a "butterfly") to a "5," in which there is on-going destructive action ("a person hitting someone with a machete"). Both free association and inquiry responses are scored and averaged, yielding a

subject's Palo Alto Destructive Content Scale (PADS) score. This scale is especially relevant to the current research since it provides norms for patients at a maximum security treatment institution, including NGRI's, and data which are presented according to the type of crime committed. This contrasts with other studies which used the scale with non-criminal hospital patients only (Stormont and Finney, 1953).

Shagoury (1971) utilized a combination of psychological variables gleaned from MMPI and Rorschach data to devise a formula which differentiated between a "homicide group" and a "property crime" group. He then employed a discriminant function analysis to yield an optimum cutoff score, with which to make predictions as to group membership based on an individual score. He achieved a valid positive rate of .71 and concludes that psychological variables in certain weighted combinations have value as discriminators between those who are violent and those who are not. The Rorschach variables of Sum C, Pathological Content, M, negative form level, and percentage of human responses were the most sensitive to differences between groups.

In another study, Haramis and Wagner (1980) likewise used a stepwise discriminant function procedure to devise a formula based on Rorschach and Hand Test scores to differentiate violent from nonviolent alcoholics. (The Hand Test is a projective test described more fully below.) These scores, the most discriminating of which was the ratio of whole Rorschach responses to human movement responses, were able to classify correctly eighty-three percent of the non-aggressive subjects and eighty-seven percent of the aggressive subjects. Hand Test variables were also found to be powerful discriminators.

Criticisms of the Rorschach. The Rorschach has been criticized for many reasons. (For a more complete review of these, see Megargee, 1966.) One of the major concerns has to do with the reliability of the test in general: the effect of memory and changes in the subject's mood on the test-retest reliability is but one aspect of the controversy. "The question here is not whether this set of blots consistently elicits the same response pattern from a subject, but whether a given set of protocols consistently elicit similar interpretations from clinicians . . . " (Megargee, 1966, p. 469). Other arguments concern the lack of an objective scoring system, the inability of the test to predict specific behavior, the failure of specific Rorschach signs to relate to psychiatric diagnosis and prognosis, and the failure of the technique to differentiate better among normal samples. When used with correctional populations, the test is criticized for not having been developed for use specifically with violent offenders, for being easily "faked," and for making many clients appear more pathological than they may be in actuality.

The Hand Test. The Hand Test is one of the few personality measures specifically developed for use with violent individuals. Devised in the early 1960's by Edwin Wagner, the test consists of ten cards, nine of which present black and white drawings of a hand making a motion, and one of which is a blank card. The cards are presented in a standardized order, and responses are noted verbatim by the examiner on a response sheet. The last card is blank, and requires that the client imagine a hand and tell what it is doing. "The Hand Test supposedly measures prototypical action tendencies that

are habitual" (Wagner, 1981, p. 591). Theoretically, ways in which a person interacts with his environment are symbolized through the types of actions which he/she projects onto the hands. Thus, some responses are active ("writing a letter"), some are affectionate ("saying hi"), some are aggressive ("punching someone") and some are bizarre ("a hand turning into a spider"). Responses are summed according to the type of action category to which they correspond. The sum of the category scores are then compared to each other in ratios, the most significant of which being the Acting Out Ratio (AOR). This consists of the number of Dependency-Affection-Communication responses compared to Aggression-Direction responses and is hypothesized to suggest the acting out potential of the subject. Clients whose scores are heavily weighted in the direction of affectionate responses are supposedly much less likely to act out in an aggressive manner against their environment than are those who produce the opposite balance of many violent responses.

Criticisms of the Hand Test. Major criticisms of the Hand Test concern its reliability and validity: in other words, how accurately does the Acting out Ratio predict actual aggressiveness of subjects and discriminate between violent and nonviolent individuals? The test has also been faulted for being easily "faked" and for using validation studies usually performed by those closely associated with the test's developer (Haramis and Wagner, 1980; Wagner, 1981). Thus, the objectivity of studies which uphold the usefulness of the Hand Test has been called into question by the scarcity of confirmatory data exclusive of those produced by Wagner and his colleagues.

Projective drawings (or House-Tree-Person drawings). Another projective technique is that measure known as projective drawings or House-Tree-Person drawings (the HTP). This assessment device requires that the subject draw a house, a tree, a person, and a person of the opposite sex on separate sheets of paper with a pencil. His/her conceptualizations of these common figures is said to provide information as to how the client perceives the environment, other people, and himself/herself. The test is easily and quickly administered and requires no specialized materials other than paper, pencil and stopwatch. There are no set time limit on how long the drawings should take and no special area of the paper which the client must choose for the representations. It is frequently administered as part of a psychological test battery, in the hopes that in some cases the drawings may confirm the diagnostic impression of the client already created by the other instruments and interview. " . . . In a few isolated cases [the test] provides an indication of the nature of the client's problems. If so, the result would be that the clinician is on a random partial reward schedule and hence the habit of administering the [test] would be very resistant to change" (Megargee, 1966, p. 370). Few if any responsible clinicians rely on drawings or on any other test in and of themselves for providing a complete clinical picture of a patient.

Although there exists an intricate scoring system which quantifies many of the types of strokes, omissions, and placements which are commonly found (Machover, cited in Megargee, 1966), many clinicians continue to rely on their diagnostic or clinical impressions of the drawings when interpreting them (Ogden, 1977). Stylistic (shading,

length and strength of strokes; placement on page) and content features (animal urinating on the tree, presence or absence of clothes on figures) are taken into account in the assessment of the meaning of the drawings.

Drawings have been widely used with the correctional population. Jacks (1969) cites the ease of administration and the "inability to be faked" as reasons for the test's popularity for use with violent individuals. Appendix A delineates the characteristics hypothesized to be indicative of a subject's violent tendencies. These criteria were used as the scoring system for the drawings in the current study.

Criticisms of projective drawings. Many of the criticisms of projective tests in general have been leveled at the House-Tree-Person technique. These include questionable reliability and validity, the lack of an objective scoring system, the lack of usefulness in predicting behavior, and the tendency to "detect" pathology where none many exist. Others admit that while in a few isolated cases the drawings may provide useful information, in most cases they do not; thus, they may be over-interpreted and their significance over-emphasized by inexperienced clinicians (Megargee, 1966).

Recent assessment devices. Schlesinger and Kutash (1981) have devised a new projective technique which they call The Criminal Fantasy Technique. It consists of a series of twelve black-and-white cards on which are depicted various crimes about to occur, presently occurring, or having just occurred. Authors cite good discrimination rates between compulsive sex offenders and substance abusers. Further research, including blind studies and considerations of the demand characteristics inherent in the test, need to occur before conclusions can be made as to the usefulness of the instrument.

Rogers (1981) devised the Rogers Criminal Responsibility Assessment Scales, which involved "twenty-three psychological and situational variables considered critical in making a forensic determination of insanity" (1981, p. 684). The instrument also contains a "hierarchical decision model" for applying the ALI test to the specific variables. This model structures the clinician and specifies the process of his/her decision-making. In addition, authors assert that it "translates the psychological variables into elements of the ALI insanity standard" (1981, p. 684). Whether the simple application of such a hierarchical model can bridge the centuries-old gap between the legal test for insanity and psychopathology as defined by the psychiatric profession has yet to be widely tested by researchers who are uninvolved with the development of the RCRAS. The Rogers (1981) study data correctly identified ninety-two percent of the patients previously evaluated as meeting insanity criteria, and sixty-nine percent of those evaluated as sane. It should be noted that these correct identifications correlate with judgments of other mental health professionals as to sanity; no information is given as to how such decisions correlate with those of the court.

Psychological Characteristics of NGRI's: Boehnert Pilot Study

Previously reviewed studies are concerned with the psychological test performance of violent offenders in general. The insanity defense is a legal test used by many violent individuals and their attorneys so as to be relieved of moral responsibility for an action. One question that has not been frequently addressed is what happens to that subgroup of individuals who fail in the insanity defense? In

other words, how do those people appear who carry the insanity plea all the way through trial but are found guilty (i.e. morally responsible) and are sent to prison?

One Florida study (Boehnert, submitted for publication, 1982) compared this group of offenders who attempted the insanity defense but failed to a group of "successful" NGRI's matched on length of incarceration and crime (murder, aggravated assault, rape, and armed robbery). There appeared to be both significant similarities and differences between the two groups.

Similarities. The groups resembled each other with respect to demographic data and use of a public defender. Most subjects were skilled or unskilled laborers; possessed an average educational level of the tenth grade, did not significantly with respect to prior arrest record and racial representations, and used a public defender in their legal cases. Global test interpretation characterized most individuals in the two groups as disturbed, impulsive men who were socially distanced and prone to act out violently, with poor emotional control. Most if not all were also deemed by the author to be in need of psychological treatment.

Differences. The two groups were also found to differ in a number of different ways. The NGRI's were significantly more likely to have waived jury trial and had a judge as the trier of fact. They were far more likely to have been previously adjudicated as incompetent to stand trial than were those who were found guilty by the court.

Test results illustrated significant differences for both MMPI and Rorschach variables. The "successful" NGRI's as a group were characterized by an 8-4 MMPI profile configuration whereas those found

guilty displayed a more elevated group profile of 8-4-6-2-9-7.

Rorschach scores suggested that the NGRI's as a group were characterized by a less intense, more modulated reaction to environmental stimuli and by greater attention to their environment and their interpersonal relationships. In contrast, those found guilty appeared to be less controlled, more emotionally labile and assaultive.

The 1979 study was a pilot work designed to provide psychological test data on those who attempted the insanity defense, information that is extremely sparse to date in the published literature. The author stressed that institution effects (i.e. hospital vs. maximum security prison) may be a confounding factor that should be taken into account. Those men at the hospital were provided with antipsychotic medication, group and individual psychotherapy, and housing in an institution which at least technically existed for purposes of treatment rather than punishment. Through demonstrating responsible behavior, each patient could gain increasing amounts of freedom of movement within and outside the Forensic Unit, some being able to roam the hospital grounds unescorted. Patients also took part in vocational and alcohol rehabilitation programs which brought them into contact with regular hospital patients--many of them women. Men who had lived at both the hospital and the prisons unanimously endorsed the hospital environment as being the more humane facility. As the MMPI in particular has been asserted to be sensitive to immediate environmental influences in addition to long-standing personality factors, it was considered possible that the less pathological profiles produced by the NGRI's were a direct result of the less pathological

environment in which they lived. The author therefore recommended that data be analyzed according to type of housing facility in which a subject resided, so that future research could take such situational variables as immediate environment into account.

The Current Study

From examining the latter research on the insanity defense, the author concluded that some statistical and demographic information exists on the demographic data of NGRI's, but that there are few data pertaining to psychological assessment in the literature. Furthermore, in reviewing the Boehnert pilot study (submitted for publication, 1982) the author was aware that far more information could be gleaned from the original test data collected on the sixty successful and unsuccessful NGRI subjects previously mentioned, and that more focus should be placed on investigating the influence of institution effects. It also was apparent that few studies have specifically addressed how the NGRI population differs from or resembles the criminal population as a whole. In addition, it was unclear the extent to which those examined in a pretrial psychiatric evaluation who did not use the insanity plea resembled the NGRI's or the criminal population as a whole. Finally, it was deemed advisable to study within-group differences based on the type of crime committed. Subjects in each group had been convicted of murder, rape, armed robbery or aggravated assault/battery. Statistical analysis might confirm the previous research findings (Monahan, 1982; Rose and Bitter, 1980; Toch, 1980) that violent offenders resembled each other regardless of type of crime committed or might suggest that the type of crime variable constituted

a major source of within-group variability which would need to be taken into account in data interpretation. Based on her review of the literature and the pilot study, the author's hypotheses were as follows.

1) The degree of personality psychopathology, as measured by psychological tests, would decrease across groups in the following way. Those who relied on the insanity defense at trial (Groups I and II) would appear the most psychiatrically disturbed; followed by those completing a pretrial sanity evaluation (Group III); with those subjects in Group IV for whom the question of mental illness was never raised appearing the least disturbed.

2) The type of pathology manifested in subjects in both the pre-trial and control groups would not be of the psychotic type: in other words, the subjects would appear to be in basic contact with reality. However, test data for these men would indicate enduring characteristics similar to those listed for antisocial personality in DSM-III, such as immaturity, lack of emotional control, and lack of empathy for others.

3) Violence indicators as provided by the Rorschach Palo Alto Destructive Content Scale and Hand Test would be consistent across groups; as all four groups consisted of individuals convicted of four types of violent crime, and literature asserts that violent individuals tend to resemble each other on psychological tests regardless of type of crime committed (Shagoury, 1971; Wolfgang and Ferracutti, 1967).

4) Subjects across groups would not differ significantly with respect to the demographic factors of race, age, education, occupation, and prior arrest record; in keeping with pilot study data (Boehnert, submitted for publication, 1982) and a demographic study conducted in Wyoming (Pasewark, 1980).

5) In light of Simon's (1967) and Steadman's (1980) contentions that factors other than the mental state of the defendant play a role in the determination of whom is found insane, it was hypothesized that the heinousness of the details of an individual's particular crime would affect his adjudication in the following way. The author asserted that those found not responsible for their actions would have committed less heinous crimes than those found guilty, as the community would demand lasting protection through prison or a death sentence from the perpetrators of the most severe crimes.

6) As a group, those subjects who used the insanity defense successfully would appear different enough on certain psychological measures so that they could be discriminated accurately from subjects in other groups on the basis of a combination of test scores.

7) Subjects would be identified according to the role their mental status played in adjudication by means of a prediction equation based on combinations of psychological test scores. Their institutional affiliation and the type of crime they committed would not be identifiable through prediction equations.

CHAPTER THREE METHODOLOGY

Subjects

Subjects consisted of 120 men convicted of rape, murder, armed robbery, or aggravated assault during the years 1974-1978. Thirty of these subjects had been found "not guilty by reason of insanity" by the court and were incarcerated in the Forensic Unit of Florida State Hospital, Chattahoochee, Florida. These were designated Group I. They were matched on type of crime and length of incarceration with thirty men who used the insanity plea as their defense all the way through trial but were found guilty and committed to the prison system (Group II) and with thirty men who completed a pretrial evaluation for the insanity defense but used a plea bargain instead and were sentenced to the prison system (Group III). Group IV was designated a control group, consisting of thirty men in the Alachua County Corrections Center (matched on type of crime with those in the other groups) for whom mental illness was not an issue at trial. Data on all 120 subjects were collected in 1978.

Through use of the card file system at Florida State Hospital, it was possible to determine who in the Forensic Unit was incarcerated under the insanity statute, as opposed to having been adjudicated incompetent to stand trial, dangerous to self or others, or mentally disordered sex offender (MDSO). In addition, reports of the

examining psychiatrists as well as the adjudication of insanity by the trial judge were available in the Florida State Hospital (FSH) files of the men in Group I. Initial screening criteria for this group were that the subject had been found "not guilty by reason of insanity" (NGRI) by the court and committed to the treatment facility.

However, for the men in Groups II and III, there existed no indication in the Division of Corrections records of past legal history, including the presence or absence of psychiatric evaluation or reliance on an insanity plea. For this reason, a more unstructured means of ascertaining who was appropriate for inclusion in the study was used. Psychologists and psychiatrists across the state who frequently served as court-appointed experts were contacted. These names were readily available due to the reliance of circuit courts on one or two experts within the jurisdiction to serve as friend-to-the-court on a regular basis. Within the limits of confidentiality, they suggested the names of men who in their recollection had been evaluated for the insanity defense before trial and those who had carried the defense all the way through trial but had been found guilty. The same procedure was used with attorneys state-wide. A total of approximately 150 names was gathered. The list of names was then divided by county. Each county records department was contacted, and the presence or absence of "Motion of Intent to Rely Upon a Plea of Insanity" in the person's legal file was ascertained. This was possible to do by telephone as such information was a matter of public record. The presence of such a motion was deemed sufficient for including the name as a potential member of Group II. If there were not such a motion

in the legal file, the individual's name was included as a potential member of Group III. Roughly three-quarters of the names suggested by the professionals had not carried the defense through trial although they had been evaluated for incompetency to stand trial and insanity at the time of the crime. Only forty-five names of men meeting criteria for Group II (relying on the insanity defense in the years 1974-1978, but being found guilty) were available after this state-wide search, confirming that use of the defense is a rare legal phenomenon (Pasewark, 1981) in terms of the absolute numbers of both those who succeed and those who fail in the defense.

The Research and Records Departments of DOC Central Office were then contacted to find out where these potential subjects were located within the prison system. Many were never found, not appearing anywhere on DOC's register, having been released to other states to face pending charges, or having attained Mandatory Conditional Release (MCR). Thirty-nine of the fifty potential Group II subjects, and forty-five of the one hundred Group III subjects were housed somewhere in DOC facilities. Of these located, only thirteen percent were not housed at Union Correctional Institution (UCI) or at Florida State Prison (FSP). This uneven distribution is explained by the fact that many are on Death Row or at FSP because of the severity of their sentences or violent behavior within the prison system. Many of those at UCI had been at FSP but through good behavior had worked their way to the less restrictive facility. The examiner had access to Death Row and maximum security prisoners, in addition to those with fewer restrictions. Eight men from Group II and five from Group

III were Death Row inmates. Only two men from the list were not available for interview by request of corrections officials: they both had histories of assaulting female visitors. Of the roughly 105 original names eligible for Group III inclusion, approximately forty-five were located and found to be at one of the two prisons mentioned above.

Prior to final subject selection, it was necessary for the examiner to screen the lists of men meeting initial criteria for inclusion in the study. Those who were unable to participate in psychological testing, actively violent, or with an IQ below 75 were excluded. Some psychological assessment had been done at Florida State Hospital and in the prisons and helped to screen for those who were retarded, illiterate, or non-English-speaking.

Table 4 presents data on those subjects in Groups I, II, and III who were deemed ineligible by the examiner or who refused to participate in the study. As can be seen from the table, three men in Group I, and one man in Group II were acutely psychotic and hence unable to participate in a research project which required informed consent. Five men in Group I, two in Group II, and three in Group III were retarded, illiterate, deaf, mute, or blind and were also excluded from the study. One man at FSH could not be tested for security reasons, and two men meeting criteria for inclusion in Group II were not seen at the request of prison officials. In addition, five men in Group I, three in Group II, and five in Group III refused to participate.

Table 4

Potential Subjects Excluded from Sample (Groups I-III)

<u>Reason for Exclusion</u>	<u>Group I</u>	<u>Group II</u>	<u>Group III</u>
Psychotic	2	1	0
Illiterate, mute, blind, deaf, or retarded	5	2	3
Security risk	1	2	0
Refused	5	3	5

Of the subjects housed in the prisons and refusing to participate, two were at FSP and six were at UCI. The relatively high number of refusals by the men at UCI may have been due to the misinformation given them by the officers escorting them to the examiner. Comments were made to the effect that their test data were not confidential and would be shared with the officers at a later date. Although the examiner attempted to correct this impression, her efforts may not always have been successful.

There was no statistically significant difference for the variables of race, age, number of arrests, or occupation between those in the Group II and Group III samples who refused and those who agreed to participate. Those excluded from Group I differed significantly from those who were included by being older at the time of the offense and by having less education. This is easily explained by examination of selection criteria. As older subjects with diagnoses of organic brain syndrome and those who were retarded (and hence with little formal education) were excluded from the sample, it was not surprising that the subjects differed with respect to these two variables.

The majority of inmates in state prisons do not have psychiatric problems: they are incarcerated for chronically antisocial behavior (Pasewark, 1980). The author attempted to include a control group in the current study which would be representative of the criminal population as a whole. Unfortunately, financial and time commitments of the author and the somewhat resistant attitude of state prison officials made the collection of data from non-psychiatric violent

offenders in the Division of Corrections impossible. An alternative, that of using data from county jail inmates matched with subjects in Groups I-III on type of crime, was more feasible, although it appeared to include some important potential methodological problems which are discussed below.

Group IV was designated a control group, consisting of men in the local jail (Alachua County Corrections Center) for whom the question of sanity had never been raised during the course of their legal case. Group IV subjects had received psychological evaluations during 1977-1978, as a matter of course in the disposition phase of their trial. Such evaluations were requested by the sentencing judge to accompany the Confidential Section of the Presentence Investigation prepared by the Probation and Parole Office. (The Intake Unit's policy of furnishing psychological evaluations as friend-to-the-court ended in late 1978.) Most of the testing was done by the examiner in her role as an evaluation counselor with the Intake Unit. A few protocols were administered by another graduate student who had been taught projectives by the same faculty member as the examiner and who had two years of experience in test administration.

Although inmates had the right to refuse evaluations, few did. Some hoped that such cooperation with standard procedure would weigh favorably with the judge at sentencing, some were encouraged to participate by their attorneys, and some hoped that psychological stressors might be viewed as mitigating factors by the judge.

Group IV subjects were matched with the other three groups on type of crime committed (that is, aggravated assault/battery, sexual

battery, armed robbery, or murder); and details of each individual crime were scrutinized to obtain as close a match as possible with crimes found in the other three groups. (Appendix B contains details of all subject crimes for all groups, obtained from attorney records, psychiatric reports, or prison face sheets.) A compelling rationale for the matching procedure was the concern that the crime label may mask very important differences that only appear when the details of the individual crimes are examined. Choice of victim (either very old or very young), unusual method of perpetration, number of victims, and bizarre details were deemed essential in devising a rudimentary rating of crime seriousness (Kern and Bales, 1980; Roth, 1978).

Despite this matching procedure, certain features differentiated Group IV subjects from other men in the study and raised questions as to the usefulness of county jail inmates as a control group. First, the subjects were post-conviction but pre-sentence inmates. That is, they had been adjudicated guilty of murder, rape, armed robbery, or assault but had not received a sentence for their crime. In a sense, they had received no consequences or punishment for their behavior; some had been out on bail until adjudication of guilt. Thus, the length of incarceration and stage in the judicial process were very different for these Group IV inmates as compared to other men in the study. They could still deny the realities of the state prison system: some believed (erroneously) that they would receive a sentence of probation or "a few months' time." This attitude appears likely to create a different mood for the testee than would the

knowledge that he was in the middle of serving a mandatory twenty-five year sentence.

In addition, some Group IV inmates had been in jail for only a few months at the time of testing. Others had been rearrested after serving state prison terms of over six years. Those in Groups I-III had all been incarcerated at either a maximum security hospital or prison for at least nine months, with most serving at least three years in some form of incarceration.

Finally, Group IV inmates were living in a very different environment than state prison residents. Abbott (1981) has written of the brutality, dirt, corruption, violence, and over-crowding present in state prison systems. Newspaper and investigatory committee reports after the time of data collection suggested that such abuses were common in the Florida Division of Corrections system as well. In contrast, the Alachua County Corrections Center facility which housed Group IV subjects was built in the 1970's, and at the time of the research, housed each man in his own individual cell with a toilet and sink. Cells were grouped around a central "pod" space which had a television and eating area. Recreation and visitation occurred on a regular basis, and each man had access to a telephone for thirty minutes per day. Each inmate was assigned to an individual counselor with a background in social work or psychology, with whom he could discuss personal problems. A psychiatrist on the staff of the local mental health center evaluated inmates for psychotropic medication twice weekly and facilitated commitment to a state psychiatric hospital if necessary. A licensed general practitioner visited the jail

two times a week to provide medical care. At the time of the re-search, there had never been a rape, murder, or serious assault reported within the jail. Thus, the conditions within the Alachua County Corrections Center were quite different from those encountered in the state prison system; and the men at the county facility may have been under less environmental stress than those in the maximum and close security prisons. It was uncertain the extent to which these differences would affect the test data of these men and the generalizability of results to prison subjects as a whole.

Materials

Consent for Human Subjects forms (see Appendix C), to be signed by each subject.

Demographic Data Questionnaire (see Appendix D), to be completed by the examiner upon review of each subject's hospital record or face sheet.

The Hand Test, a projective instrument consisting of nine cards illustrating hands in the process of making certain motions, and one blank card.

The Rorschach Inkblot Test, another projective personality test consisting of ten cards, each showing a chromatic or achromatic inkblot.

The Minnesota Multiphasic Personality Inventory (MMPI), one of the most widely used objective personality tests, consisting of 550 statements to which the subject must answer true or false.

Blank paper and lead pencils, to be used by each subject for completing his House-Tree-Person Projective Drawings, another projective technique.

Procedure

A signed consent form approved by a Human Subjects Committee was obtained for each subject in Groups I, II, and III. (Group IV had a "consent to be tested" form in their records, though this form was not necessarily obtained by the author; it may have been witnessed by another graduate student.) Subjects in Group I were introduced to the examiner by their counselors at the hospital, who usually sat in while the research was explained to them. At this point, the subject had the option of agreeing to participate in the research or refusing. If he refused, he was escorted back to the floor. Ninety percent agreed to participate. Data on those refusing have been presented previously. Potential subjects in Group II and Group III were contacted by letter a week before the author's arrival at the prison. The letter explained only who the examiner was and that she wished to meet with the potential subject to discuss participation in a research project. Upon her arrival at the prison, she met each subject individually and explained the procedure to him. He was free at the time to comply or refuse. Again, most inmates agreed to participate. Possible reasons for refusal have been discussed previously in the Methodology section.

After the brief explanation of what would be expected of him during the testing period, each subject was informed that any questions which he might have about the procedures would be answered during the debriefing period following testing. In addition, the confidentiality of the materials obtained in the research project was stressed with

each subject. Often, between fifteen and thirty minutes were spent answering questions pertaining to this issue of confidentiality. As most of the subjects in Groups II and III had case appeals pending, this was considered to be an extremely important area of concern.

A test battery consisting of a WAIS, Rorschach, MMPI, drawings, and Hand Test was selected for use in the study. Intelligence testing was included in the battery as a screening device for the MMPI and because some researchers (Heilbrun, 1979) have posited intelligence as a moderating variable for psychopathy and violence. The MMPI was included as a well-known objective test, easily administered and scored. A large body of literature exists on the use of this instrument with prison populations and psychotic individuals (Butcher and Tellegen, 1978; Megargee, 1977; Welsh and Dahlstrom, 1972). The Rorschach was selected as an instrument because of the great amount of research supporting its merits in the evaluation of pschotics and violent individuals (Exner, 1980; Finney, 1955 Sommer and Sommer, 1958; Storment and Finney, 1953; Towbin, 1959); and because many recent studies have found some of its quantitative scores to be useful variables in discriminating various criminal populations (Haramis and Wagner, 1980; Rose and Bitter, 1980; Shagoury, 1971). In addition, a special Rorschach rating system designed for use with violent offenders (Rose and Bitter, 1980) was applied to these protocols. The Palo Alto Destructive Content Scale was seen as being especially relevant to the study since much of the standardization data for the system had been obtained from NGRI subjects. Another projective test, the Hand Test (Wagner, 1969), was designed to detect elements of aggression in an

individual's style of interaction with the environment. It was included in the present battery as the only test developed specifically for evaluating acting-out potential in violent individuals. A third projective test, House-Tree-Person Drawings, was placed in the battery after review of the literature upholding its inability to be "faked," and hence its usefulness with court populations (Jacks, 1969). Use of an entire battery, rather than reliance on one test, was deemed essential in obtaining detailed personality descriptions of the individuals in the study and to minimize the likelihood of a false impression of personality health/pathology based on over-reliance on a single test.

Members of Groups I, II, and III had intelligence test scores from prior examinations by the in-house psychology staff in their records. These were the only scores obtained by anyone outside the research which were accepted, except for approximately five control group test batteries which were completed by a colleague of the author. As intelligence served as more of a screening function than in any other capacity, such prior data in Groups I, II, and III were deemed admissible. Time limitations made obtaining an additional WAIS on ninety subjects impossible.

The Rorschach, Hand Test, projective drawings, and MMPI were administered to each man in Groups I, II, and III by the author. A xerox of the face sheet of each subject in Groups II and III was provided by the Division of Corrections for the demographic information therein. The entire record for Groups I and IV was reviewed by the author as a means of collecting personal information for those groups.

As the examiner was responsible for both administering and scoring the tests, it was not possible to achieve a truly "blind" study (in other words, a study in which the examiner had no way of knowing which data were generated by which subject). Especially in regard to responses on the Rorschach and Hand Test, certain comments or percepts might be unusual enough to cause the author to recognize the protocol (and hence identify the subject). To minimize such recognition, certain steps were taken. After all data from each subject were collected, the protocols were turned over to an assistant, who removed all names from data and assigned each packet a code number drawn from a Table of Random Numbers. All data were scored by the examiner in coded form six months to three years after data collection had taken place.

The length of time which had expired between collection and scoring was instrumental in preventing experimenter identification of about ninety-five percent of the subjects. Even after three years, four subjects were recognized by response, style, lengthy recounting of a dream during the free association on the Rorschach, or numerous threats to the examiner recorded in the Rorschach protocol. Another subject was identified by the repetitive theme of his drawings which went contrary to the test instructions.

Although it is certainly possible that the author may have subconsciously remembered more than five protocols, factors in addition to the length of time prior to scoring argue against this. The first factor concerns the tight scheduling involved in the data collection. The examiner administered five full test batteries per

day, from eight o'clock in the morning through 5:30 in the afternoon. Subjects were lined up outside the testing room waiting to be called for evaluation, as the officers brought a few men at a time to the area. There was rarely an interval of over one minute between subjects, causing faces to "blend together" somewhat in the mind of the examiner after a full day of testing. The second factor relates to group affiliation. Group II and Group III subjects were housed in the same facilities, and were tested during the same period of data collection. They were brought to see the author on the basis of the location of their housing unit or work assignment in the prison, not on the basis of their group membership within the present study. Hence, the author usually did not know whether she was interviewing a Group II or a Group III subject. (Exceptions existed in two cases in which she was familiar with the details of the subject's case prior to evaluation, and had taken extra security precautions accordingly.) Thus, subjects in Groups II and III were seen for the most part randomly during an extremely intense period of data collection, after which a large part of the data was not examined again for years. It was unlikely that any but the most striking of subjects would be identified at that later time. .

Methods of Analysis

Several different methods of analysis were performed due to differences in the types of measures employed, the number of variables included, and the different types of questions involved. Chi square analyses were computed for dichotomous variables (occupation and race). Next, discriminant function analyses were performed in order to extract factors from the measurement battery which specified and

capitalized on differences between groups (Cooley and Lohnes, 1962). The combination of the variables which added the most to the separation of the groups produced a function which best discriminated between groups. Classification matrices, illustrating the percentage of correct classifications, were also generated. Subjects were grouped in three ways: according to the extent of their reliance on mental illness as a defense, the type of prison or hospital in which they resided, and the type of crime they committed. For elaboration of this grouping system, see Table 5.

The discriminant function analyses were run examining eighteen separate dependent variables. The significance (F value) of each was examined, and ten variables having the largest F values were then selected for inclusion in a different multivariate procedure, the MANOVA.

A MANOVA (multivariate analysis of variance) theoretically investigates whether some or all of the populations from which the samples were drawn are centered at different locations in the measurement space spanned by the dependent vector variables (Cooley and Lohnes, 1962). The analysis itself is a linear multivariate procedure which computes the relative influence of each variable with respect to criterion differentiation. As mentioned above, ten variables were selected for inclusion in the MANOVA, based on the level of their significance in the discriminant function analysis. Subjects were again grouped systematically in the three ways presented in Table 5.

Both the discriminant function analysis and the MANOVA are multivariate parametric techniques. Their use implies that the

Table 5
Subject Grouping System

By Group:

Designation by Group was determined by the extent to which subjects in that group relied on psychiatric psychopathology as a defense. Group I--relied on the insanity defense throughout trial and were found "not guilty by reason of insanity" (NGRI)
Group II--attempted the insanity plea but were found guilty and sentenced to prison
Group III--were evaluated for the insanity plea but never relied on the defense at trial; the issue of their mental illness was raised as a possible reason for mitigation during the sentencing phase of trial
Group IV--control group for whom the question of mental illness was never raised.

By Residence:

Designation by Residence was determined by the facility at which the subject resided.
Residence I--subjects at Florida State Hospital, Chattahoochee, Florida
Residence II--subjects at Florida State Prison (FSP), maximum security
Residence III--subjects in close security prisons ("close" is a security classification used by the Florida Division of Corrections to designate the second most restrictive category for inmates)
Residence IV--subjects in the Alachua County Corrections Center, Gainesville, Florida.

By Crime:

Designation by Crime was determined by the type of crime for which the subject had been convicted.
Crime I--Murder
Crime II--Armed Robbery
Crime III--Sexual Battery
Crime IV--Aggravated Assault or Aggravated Battery

following assumptions regarding population parameters are fulfilled: first, that the distribution of values in the population is shaped as a normal curve; and second, that observations are drawn at random from the populations under consideration. The current study deviated to a certain extent from both of these assumptions.

First, there was no way of knowing the hypothetical shape of the distribution of values in the populations under consideration. This was not considered to be a significant problem because the techniques are relatively "robust" with respect to violation of the assumption of normality: that is, even large deviations from the shape of a normal curve will not invalidate the results of parametric tests (Wallace, 1979).

The assumption that observations were drawn randomly has also been violated. This assumption indicates that "the value of a particular observation does not bias or affect the value of another observation; that is, the values of the observations are independent of one another" (Wallace, 1979, p. 45). However, in the current study, subjects were matched on type of crime and length of incarceration to minimize those variables as potential sources of error. Matching to reduce error is an acceptable research design technique and is used in a wide range of studies. Use of matching in the current study means that subjects were not selected randomly at all: they had to meet certain criteria to be considered for inclusion in the study.

Matching was deemed necessary due to the small size of the samples and limited nature of the research project. The author attempted to balance the adverse effects of using groups with an "n"

of only thirty in each by limiting possible error from variables of type of crime and length of incarceration. However, this departure from random sampling implies that in the current study, sample variances may greatly underestimate the population variances. In other words, the range of values for the psychological and demographic variables may be too narrow to serve as a true representation of the range of values existing for a broader, far larger random sample of subjects and observations. This latter sample would be assumed to approximate to a fuller extent the actual characteristics of the population as a whole.

CHAPTER FOUR RESULTS

In the present study, psychological and demographic variables were analyzed with a variety of statistical techniques; namely, Pearson Chi-square, discriminant function analysis, and multivariate analysis of variance (MANOVA). Results of these analyses will be examined in the light of how they pertain to the hypotheses raised in the Review of the Literature.

Hypothesis 1

The first hypothesis asserted that there existed a continuum of psychopathology for the subjects in the current study, with those who relied on the insanity defense at trial (Groups I and II) appearing the most psychiatrically disturbed; followed by those completing a pretrial sanity evaluation (Group III), with those subjects in the control group (Group IV) displaying the least pathology. Data analysis did not support this idea of a continuum of psychiatric psychopathology.

MMPI Data

MMPI data were examined in two ways: by studying differences in the four group profiles, and by statistically analyzing Goldberg scores. Group profiles are obtained by averaging the scale scores for all subjects in a group, then plotting the profile. It is important to realize that this method provides the average profile for a group of subjects: it is not sensitive to individual differences in

profiles. However, it does provide a way of looking at code types present in the group data.

Figures I-III illustrate group MMPI data. Figure I demonstrates the differences between the mean MMPI patterns of the four groups, using all 120 profiles regardless of validity configuration. As can be seen from the figure, there is some variation among group profiles. Group I would be classified as showing an 8-4 profile; Group II showed a more elevated 8-4-6-2-9-7 configuration. Group III displayed an 8-4-9 pattern; Group IV was characterized by a 4-spike profile.

Figure II presents mean MMPI profiles for the four groups, with a validity score cutoff of F-K of ± 17 . As has been previously discussed, "validity indicators" which assess a respondent's test-taking style and the frankness with which he/she answered the items were built into the MMPI. The "F-K index" is one commonly used validity score combination, obtained by subtracting the raw K score from the raw F score. Some authors (Lachar, 1974) advocate using a liberal cutoff score of ± 17 . With this cutoff, profiles with an F-K index equal to or greater than +17 are considered "faking bad." This indicates that the respondent either did not properly understand the test items or was attempting to portray a more psychiatrically disturbed picture of himself/herself than was actually the case. An F-K index greater than or equal to -17 is termed "faking good": in other words, the respondent was attempting to convey the best possible picture of himself/herself, not admitting behaviors or personality difficulties which actually existed at the time of testing. Using this cutoff score, profiles with an F-K of ± 17 or more were

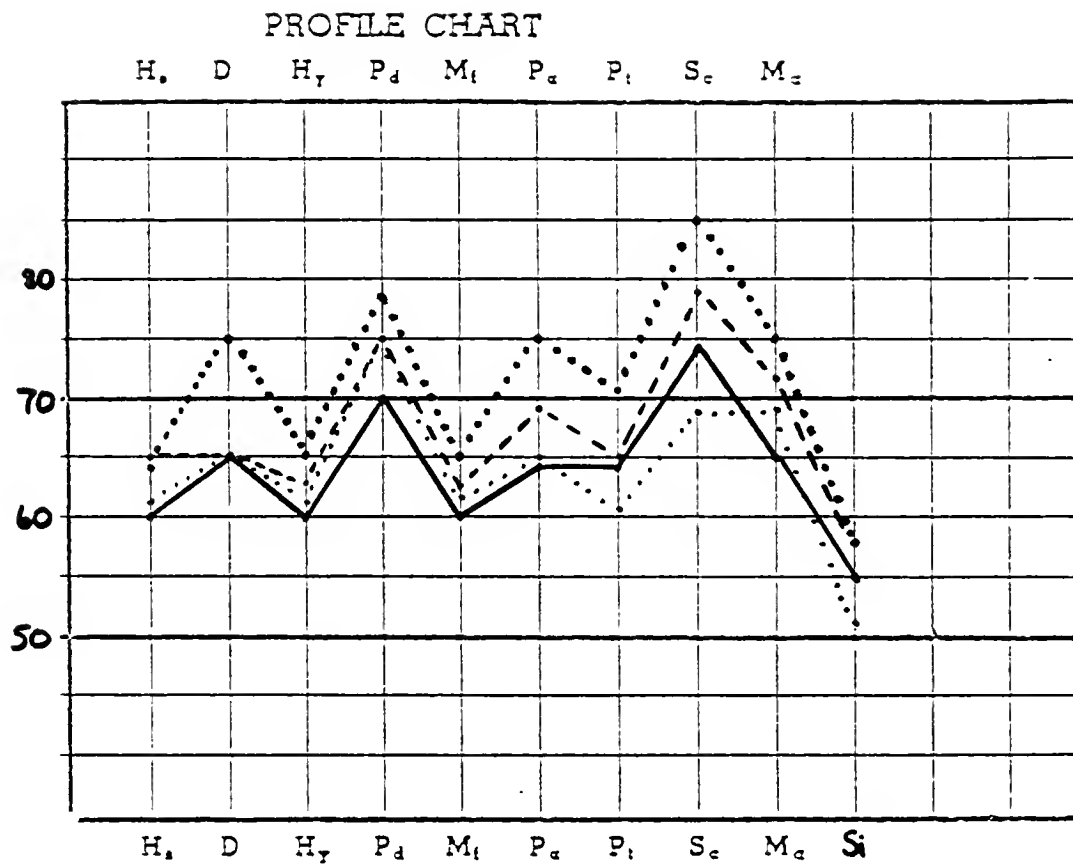


Figure I

Group MMPI's (A11)

- Group I
- Group II
- Group III
- Group IV

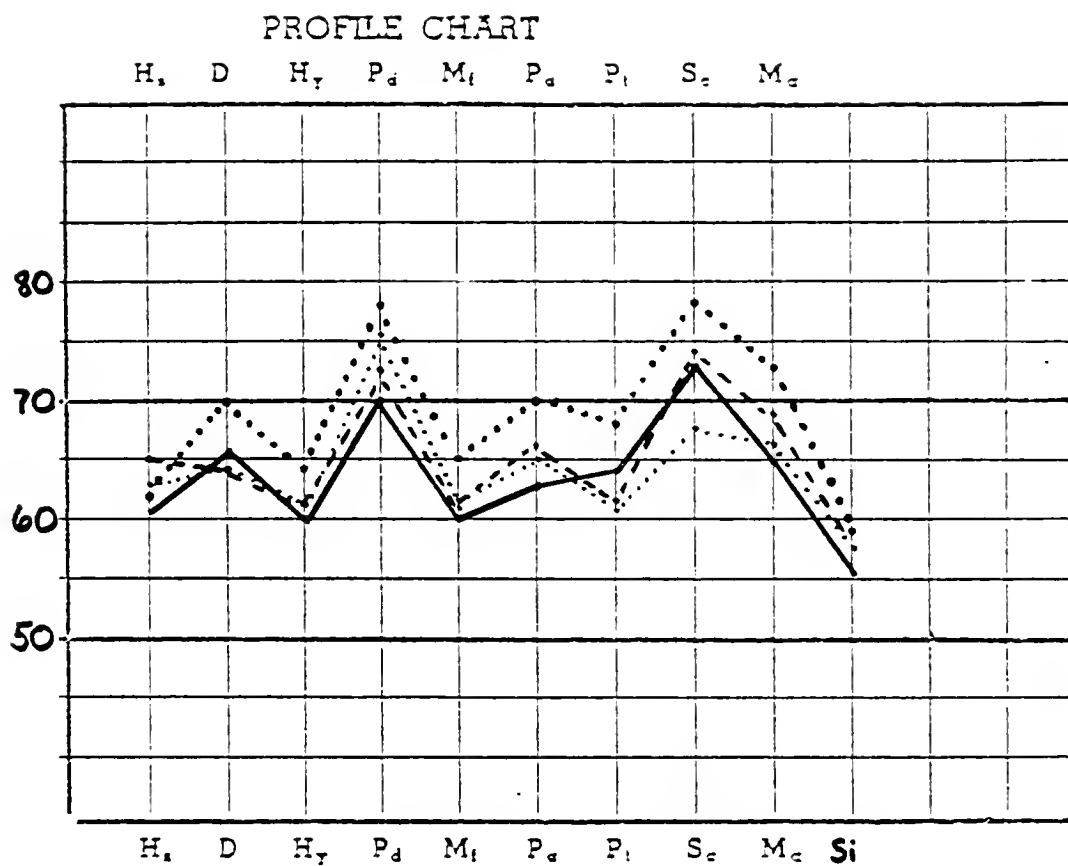


Figure II

Group MMPI's (F - K = ± 17)

- Group I
- Group II
- Group III
- Group IV

considered invalid and were excluded from inclusion in Figure II (n=101). There were twenty-seven valid profiles in Group I, twenty-four in Group II, twenty-two in Group III, and twenty-eight in Group IV.

Figure II suggests that Group I was characterized by an 8-4 profile, while Group II showed a more elevated 4-8-9-6-2 configuration. Group III displayed an 8-4 pattern; Group IV was characterized by a 4-spike profile.

Figure III illustrates the mean group MMPI profiles using a more stringent F-K cutoff score of ± 11 . Stringent validity criteria are advocated by Grow (1980), based on his analysis of patterns of defensiveness on the MMPI of a group of men undergoing court ordered evaluations. With a cutoff score of ± 11 , those subjects with an F-K index of +11 are considered to be "faking bad"; those with an F-K index of -11 are "faking good." In Figure III, all profiles with an F-K of greater than or equal to ± 11 were excluded (n=70). There were seventeen valid profiles in Group I, thirteen in Group II, nineteen in Group III, and twenty-one in Group IV. The figure reveals that, using a more stringent validity cutoff score, the mean profile for Group I was still an 8-4, with Group II characterized by an 8-4-2-9 profile. Group III displayed an 8-4-2 pattern; Group IV again showed a 4-spike profile.

MMPI data were also analyzed according to profile Goldberg scores. As discussed previously, Goldberg (1965, 1972) asserts that classification of MMPI profiles into diagnostic groups can be most accurately achieved through use of linear combination equations. He

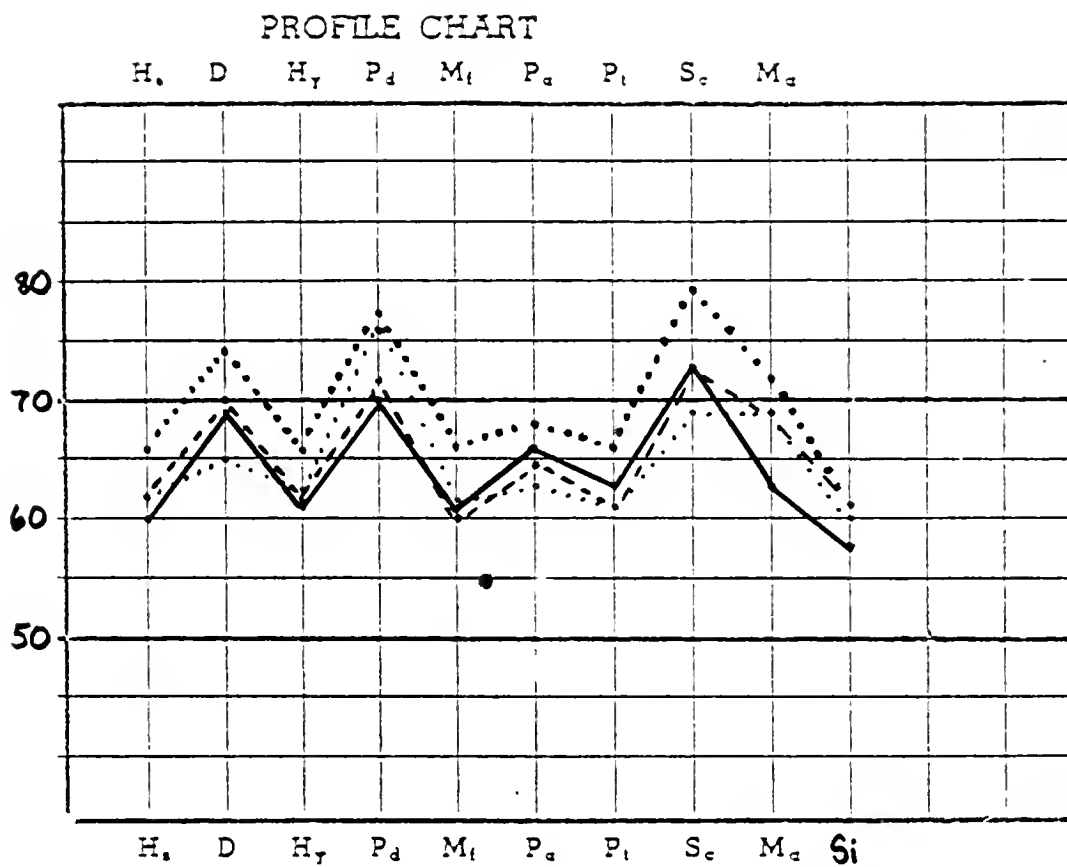


Figure III

Group MMPI's ($F_{\text{c}} - K = \pm 11$)

- Group I
- Group II
- Group III
- Group IV

found that through combining MMPI scale scores according to the formula " $L + Pa + Sc - Hy - Pt$," he could correctly discriminate psychotic from neurotic profiles 74% of the time (1965). This formula " $L + Pa + Sc - Hy - Pt$ " was termed "Goldberg Original" in the present study. Similarly, he devised two additional linear combination formulas for discriminating psychiatric patients from normals, and sociopathic from psychiatric patients (1972). The former, designated in the current study as "Goldberg I" formula, is " $Hs + 2Pd - Ma$." The latter formula, designated "Goldberg II," combines scales as follows: " $2Pd - Hy - Sc$." He asserts that these formulas have an "accuracy hit rate" of 93% (1972).

Table 6 presents the means and standard deviations of the Goldberg scores across groups, using different validity cutoff scores. Table 7 presents the results of a discriminant function analysis, the first step of which determined whether a significant difference existed among the scores of the various groups. When all MMPI's, regardless of validity score, were analyzed, no significant differences among any of the group Goldberg scores emerged ($p \leq .25$). Most of the profiles in all four groups were classified as being in the psychotic range using the "Goldberg Original" formula. Similarly, statistical analysis of the 101 profiles deemed valid using an F-K cutoff score of ± 17 revealed no significant difference for any of the Goldberg scores across groups.

When data were analyzed using only those profiles deemed valid using the validity score cutoff of ± 11 , a different trend was suggested. Although there appeared to be no significant difference

Table 6
Goldberg Scores with Varying F-K Indices

F-K = ± 11

<u>Variable</u>	<u>Means</u>				
	<u>Group I</u>	<u>Group II</u>	<u>Group III</u>	<u>Group IV</u>	<u>All</u>
Goldberg 0	65.35	61.61	66.94	60.23	63.56
Goldberg I	138.64	146.15	135.42	147.09	141.70
Goldberg II	107.35	107.07	109.78	127.04	113.87

Standard Deviations

Goldberg 0	26.35	24.88	17.33	23.48	23.02
Goldberg I	32.65	29.75	32.28	32.40	31.96
Goldberg II	23.24	31.10	20.52	20.93	23.54

F-K = ± 17

<u>Variable</u>	<u>Means</u>				
	<u>Group I</u>	<u>Group II</u>	<u>Group III</u>	<u>Group IV</u>	<u>All</u>
Goldberg 0	62.92	66.45	67.27	60.07	63.92
Goldberg I	136.25	146.33	140.22	147.57	142.65
Goldberg II	107.48	113.66	111.77	120.78	113.57

Standard Deviations

Goldberg 0	26.06	23.42	16.61	22.83	22.73
Goldberg I	29.84	30.06	42.57	37.28	35.10
Goldberg II	23.01	28.09	19.91	27.15	24.90

All MMPI's

<u>Variable</u>	<u>Means</u>				
	<u>Group I</u>	<u>Group II</u>	<u>Group III</u>	<u>Group IV</u>	<u>All</u>
Goldberg 0	64.00	71.53	71.74	62.23	67.32
Goldberg I	135.24	147.16	140.64	145.43	142.11
Goldberg II	107.90	109.74	106.32	117.64	110.43

Standard Deviations

Goldberg 0	25.43	24.40	19.84	23.64	23.42
Goldberg I	28.43	28.65	39.10	40.84	37.45
Goldberg II	21.84	27.84	25.00	29.03	27.43

Table 7
Significance of MMPI Goldberg Scores

<u>Variable: All MMPI's</u>	(3,116)	<u>F</u>	<u>Significance</u>
Goldberg Original		1.34	.25
Goldberg I		.71	.25
Goldberg II		1.12	.25
<u>Variable: F-K = ± 17</u>	(3,97)		
Goldberg Original		.54	.25
Goldberg I		.60	.25
Goldberg II		1.36	.25
<u>Variable: F-K = ± 11</u>	(3,66)		
Goldberg Original		.35	.25
Goldberg I		.58	.25
Goldberg II		3.18	.25

across groups for the Goldberg Original formula (most profiles being classified psychotic) or for the Goldberg I formula (most profiles being classified psychiatric) ($p \leq .25$), the discriminant function did indicate significant differences across groups for the Goldberg II variable (sociopathic vs. psychiatric profiles). As can be seen from examination of the means of the four groups (Table 6), a trend appeared to exist such that Group IV appeared to have a higher score (127, in the psychopathic range) than the other three groups (107, in the psychiatric range). No MANOVA was conducted to investigate further this difference between groups due to the small sample size of the four groups. There were seventeen profiles in Group I, thirteen profiles in Group II, nineteen in Group III and twenty-one in Group IV, since many had been excluded by the ± 11 cutoff score. The generalizability of results obtained using such small sample sizes is questionable, as are conclusions based on the use of multivariate techniques with very small numbers of subjects.

Thus, regardless of the validity cutoff score used to interpret the profile, there did not appear to be significant differences across groups with respect to the mean Goldberg scores, with the possible exception of Goldberg II scores in a smaller sample of MMPI's which relied on a validity score of F-K ± 11 . Most of the profiles in all groups were classified as psychiatric ones according to the Goldberg Rules.

Rorschach Data and IQ Scores

Previous research (Rose and Bitter, 1980; Shagoury, 1971; Wolfgang and Ferracutti, 1967) has shown the Rorschach to provide valuable information as to characteristics of violent offenders and

to be sensitive to individual differences among them. The current research examined several Rorschach variables and found that for only two out of eight Rorschach variables were there significant differences across groups. This section will first consider those variables which did not appear to differ significantly across groups.

Table 8 presents the F values and level of significance of these values for IQ and Rorschach determinants. These results are the product of a discriminant function analysis. As can be seen from the table, there was no significant difference across groups for the variables of Palo Alto Destructive Content Scale; F%; F+%; Extended F+%; A%; Responses to Cards VIII, IX, and X%; or number of M responses. These variables are considered individually below, and Table 9 includes their respective means and standard deviations across groups.

This finding of lack of significance for these variables suggested that a degree of commonality existed across subjects with respect to certain psychological characteristics. They did not differ according to group on scores from the Palo Alto Destructiveness Content Scale (PADS), the previously mentioned content rating scale normed on NGRI subjects, which provides a quantitative estimate of aggressive content in a Rorschach protocol. Average PADS score was 1.77 compared to Rose and Bitter's sample scores of 1.61 for non-violent subjects and 2.29 for murderers.

The average F% across groups was 24.4%. F% is hypothesized to represent the extent to which a subject responds to objective, tangible features in the environment, as opposed to internal needs or desires (Klopfer and Davidson, 1962). Twenty-four percent was a low score for

Table 8
Significance of IQ and Rorschach Determinant Scores

<u>Variable</u>	<u>F (3,116)</u>	<u>Significance</u>
IQ	1.25	.25
Palo Alto	1.21	.25
Sum C	4.47	.005
F%	1.83	.145
F+%	.93	.25
Extended F+%	2.14	.10
A%	1.43	.24
VIII, IX, X%	1.17	.25
M	.17	.25

Table 9
Group Means and Standard Deviations

Means

<u>Variable</u>	<u>Gp. I</u>	<u>Gp. II</u>	<u>Gp. III</u>	<u>Gp. IV</u>	<u>All</u>
Goldberg Original	64.0	71.5	71.7	62.2	67.3
Goldberg I	135.2	147.1	140.6	145.4	142.1
Goldberg II	107.9	109.7	106.3	117.6	110.4
Drawing	14.6	15.1	12.1	15.1	14.2
CF	1.06	2.23	1.73	1.43	1.61
PADS	1.74	1.69	1.76	1.89	1.77
Sum C	2.73	5.93	4.90	3.70	4.31
F%	29.2	18.4	24.9	25.4	24.4
F+%	66.0	69.6	77.8	66.2	69.9
Extended F+%	75.3	80.3	83.3	79.9	79.7
A%	47.9	45.8	47.6	53.2	48.6
8,9,10%	33.6	34.8	34.9	31.6	33.7
M	1.83	1.93	2.16	2.13	2.01
Heinousness	1.23	1.76	1.70	1.70	1.60
Education	10.3	10.6	10.7	10.9	10.6
Arrests	3.30	6.96	4.60	5.36	5.05
Age	28.3	28.0	29.5	25.7	27.8

Standard Deviations

<u>Variable</u>	<u>Gp. I</u>	<u>Gp. II</u>	<u>Gp. III</u>	<u>Gp. IV</u>	<u>All</u>
Goldberg Original	25.4	24.4	19.8	23.6	23.4
Goldberg I	28.4	28.6	39.1	40.8	34.7
Goldberg II	21.8	27.8	25.0	29.0	25.6
Drawing	5.3	5.9	5.3	5.9	5.6
CF	1.0	1.4	1.3	1.8	1.4
PADS	.4	.3	.5	.5	.4
Sum C	1.1	1.8	1.5	1.5	1.4
F%	20.8	15.7	14.9	20.2	16.1
F+%	29.2	36.7	24.8	32.9	31.2
Extended F+%	15.8	13.3	12.6	12.0	14.6
A%	15.1	13.3	12.6	17.0	14.6
8,9,10%	7.1	6.8	7.5	9.4	7.8
M	1.9	1.8	2.4	2.1	2.1
Heinousness	.9	1.1	1.1	1.0	1.0
Education	2.5	3.0	2.7	1.8	2.5
Arrests	4.3	12.9	5.5	4.5	7.7
Age	6.0	7.1	10.9	8.4	6.3

this variable suggesting that the subjects paid marginal attention to environmental cues and demands.

The average F+% across groups was 69.9%. This variable is the percentage of pure form responses (F%) which are of a positive form level (i.e. which correspond well to objective features of the blot). It serves as a measure of reality contact of the subject (Ogdon, 1977) representing the quality of the "fit" between blot characteristics and verbalized responses. Seventy percent was again a somewhat low score indicating that the subject frequently was not able to conform his perceptions to the objective features of the blot.

The percentage of animal content, or A%, provides a measure of immaturity, acting-out potential, and stereotypy of thought of the subject (Ogdon, 1977). The average A% of 48.6% in the current study suggested that a fairly high level of impulsivity and immaturity was present across groups. The percentage of responses to Cards VIII, IX and X reflects the subject's degree of responsivity to emotional stimuli (Ogden, 1977). An average score of 33.7% indicated that most subjects in all four groups displayed an average degree of responsiveness to emotion-arousing situations. Finally, M is the number of human movement responses in a Rorschach protocol and is frequently used as a measure of empathy in interpersonal relationships. An average score of two responses per protocol was somewhat low indicating that difficulty in maintaining empathic human contacts was a problem across subjects in the current study.

Thus, subjects across groups appeared to resemble each other in terms of Rorschach characteristics. These suggested that as a group they were immature, impulsive individuals somewhat lacking in empathy,

who displayed average responsiveness to emotion-arousing situations and who were in tenuous contact with reality, not paying a great deal of attention to demands placed on them by their environment.

Another variable, that of Extended F+%, represents the percentage of all responses of positive form level including movement, shading and color responses. (For a more detailed explanation of the different types of responses, the reader is referred to Klopfer and Davidson, 1962.) This is hypothesized to represent a subject's degree of reality contact with his environment. As can be seen from Table 8, groups differed on this variable at the .10 level of significance suggesting a possible trend toward variability among groups concerning the degree of reality testing present. As can be seen from Table 9, Group I scores tended to be lower than the scores in the other groups (75.3 vs. 80.3, 83.3, and 79.9 respectively) with 75.3 falling at the upper end of the psychotic range. With respect to the confidence intervals for this variable (see Table 10), there appeared to be a moderate degree of overlap between the four groups. In addition, there was more variability among Group I subjects than among those in the other groups (fifteen points compared to thirteen, twelve, and twelve percentage points respectively). This augured against the notion that NGRI's were homogenous with respect to appearing uniformly more psychotic than other subjects.

Subjects differed across groups on the variable of Sum C ($p \leq .005$). Sum C, the weighted sum of color responses, is hypothesized to measure a subject's emotional control, impulsivity, and acting-out potential. As can be seen in Table 9, those in Group I

Table 10

MANOVA Results:
Variables of Sum C and Extended F+%

Variable: Sum C

F = 4.47

p = $\leq .005$

Group	Mean	S.D.	S.E.	95% Confidence Interval
I	2.73	2.39	.44	1.84 to 3.63
II	5.93	3.73	.68	4.54 to 7.33
III	4.90	4.04	.74	3.39 to 6.41
IV	3.70	4.04	.74	2.19 to 5.21

Variable: Extended F+%

F = 2.14

p = $\leq .10$

Group	Mean	S.D.	S.E.	95% Confidence Interval
I	75.33	15.87	2.89	69.41 to 81.26
II	80.33	10.70	1.95	76.34 to 84.33
III	83.30	9.80	1.79	79.64 to 86.96
IV	79.90	12.06	2.20	75.39 to 84.40

appeared to have the lowest Sum C scores (2.7) (and hence the least volatility), whereas Group II appeared to have the highest (5.9) (with corresponding greatest lability and acting-out potential). In examining the confidence intervals for the Sum C variable, it appeared that there was no overlap between those in Group I and those in Group II (Table 10). Ninety-five percent of Group I subjects obtained scores between 1.8 and 3.6; ninety-five percent of Group II subjects fell between scores of 4.5 and 7.3, rather high Sum C values. As can be seen from the table, there was greater overlap for the other groups. Average variability across groups was 3.6.

Thus, there existed a tendency for Group I subjects (NGRI's) to have poor reality testing as compared to those in other groups but to be more emotionally controlled. In contrast, those in Group II (subjects who attempted the insanity plea but failed) appeared to be in basic contact with reality, but displayed marked emotional over-reactivity and high potential for acting-out. Those in the other groups appeared to fall somewhere between these two extremes capable of some basic reality testing but moderately emotionally labile and impulsive.

In the current study, IQ was used primarily as a screening tool to ascertain whether subjects could comprehend MMPI items. As can be seen from Table 8, subjects did not differ significantly across groups with respect to intelligence ($p \leq .25$). Average IQ across subjects was 96.

Projective Drawings

House-Tree-Person drawings were scored according to the system presented in Appendix B. The range of possible scores was 1-32 and the average score across subjects was 14.2 (Table 9). As can be seen from Table 11, groups did not differ significantly with respect to this variable ($p \leq .25$).

Hand Test

Two Hand Test variables were analyzed in a discriminant function analysis: the Acting-Out Ratio (AOR) and Pathology score. As discussed in the Review of the Literature, the Acting-Out Ratio is hypothesized to provide an estimate of a subject's potential for aggressive acting-out. This ratio consists of the comparison of the number of non-aggressive responses to aggressive responses (Wagner, 1969). In the current study, across all groups, the AOR was in the opposite direction than would be predicted given that the sample consisted of violent offenders. In other words, subjects gave more affectionate, dependent responses than aggressive, directive ones. In addition, as can be seen from Table 11, there appeared to be no significant difference between groups with respect to AOR score ($p \leq .25$). The Pathology score represents the percentage of pathological content responses in the protocol (Wagner, 1969) and is purported to be an indicator of psychosis. The average Pathology score in the current study was 14%, not indicative of generally psychotic profiles; and did not differ significantly across groups ($p \leq .25$).

In summary, subjects appeared to resemble each other in many ways across groups. On variables measuring reality contact and

Table 11
Hand Test and Projective Drawings Scores

<u>Variable</u>	<u>F (3,116)</u>	<u>Significance</u>
Drawings	1.91	.13
Acting-Out Ratio	.23	.25
Pathology Score	.12	.25

<u>Variable</u>	<u>Means</u>				
	<u>Group I</u>	<u>Group II</u>	<u>Group III</u>	<u>Group IV</u>	<u>All</u>
Hand AOR	110.9	110.2	112.4	****	111.2
Hand Path %	11.8	15.9	15.5	****	14.4

<u>Standard Deviations</u>					
<u>Variable</u>					
Hand AOR	106.3	78.5	90.3	****	92.7
Hand Path %	13.2	17.1	14.8	****	15.1

emotional control, Group I and Group II subjects appeared to be the most disparate groups with Group III and Group IV subjects showing less extreme scores. Group MMPI profiles differed somewhat as to code type and elevation but did not follow a continuum of pathology as stated in the hypothesis.

Hypothesis 2

Hypothesis 2 predicted that most if not all of the test protocols in Groups III and IV would be sociopathic ones rather than psychotic, "crazy" ones. This hypothesis appeared to be an overly broad generalization, and was not supported by the data.

MMPI Data

When examining the group profile data (Figures I-III), it appeared that regardless of the validity score cutoff, the group code type of Group IV was a 4-spike; i.e. an elevation about 70T, on the Psychopathic Deviate scale. Similarly, the basic code type for Group III, across validity score cutoffs, was an 8-4 type, with elevations above 70T present on the Schizophrenia and Psychopathic Deviate scales. Thus, although Group IV's 4-spike would be classified as a strictly psychopathic profile, Group III's 8-4 pattern indicated that both psychotic and sociopathic qualities were present in the personality profile (Lachar, 1974).

Goldberg II scores, regardless of the validity cutoff score employed, classified Group IV profiles as psychopathic ones. Group III classification did vary according to the stringency of validity scores (see Table 6). When all Group III profiles were considered (in other words, when none was eliminated due to F-K index), the Goldberg II mean of 106 fell under the Psychiatric classification;

similarly, the Goldberg II mean of 107 for Group III profiles which used an F-K index of ± 17 was labeled Psychiatric. When profiles using an F-K index of ± 17 were examined, the mean Goldberg II score of 111 indicated that the profiles would be classified in the Psychopathic grouping. Thus, Group IV profiles were consistently classified as psychopathic; but depending upon the validity criterion used, Group III profiles were classified as both Psychiatric and Sociopathic.

Rorschach Data

As discussed previously, most of the Rorschach variables did not differ significantly across groups. Individuals in both groups were characterized by Rorschach determinant scores indicative of impulsivity, lack of empathy, and lack of close attention paid to environmental cues. Examination of Sum C data pertaining to acting-out potential and degree of emotional control (Table 10) indicated a trend for Group III subjects to show less emotional control and higher assaultive potential (Sum C of 4.9 vs. 3.7) although considerable overlap existed within the confidence intervals of the two groups.

A substantial degree of overlap existed in the confidence intervals for the variable of Extended F+% as well (Table 10). This measure of general reality contact indicated that some individuals in both groups were maintaining basic ties with reality, with the ranges of scores for the two groups being practically identical (79-86 for Group III, 75-84 for Group IV).

Thus, although Group IV test data appeared consistent with psychopathic profiles for individuals in that group, the same could not be said for Group III data. Both Rorschach and MMPI test material suggested a more equivocal picture which included elements of both psychopathic and psychotic personality features.

Hypothesis 3

Hypothesis 3 utilized the indicators of violent acting-out found in the Hand Test Acting-Out Ratio and the Palo Alto Destructive Content Scale (PADS) in predicting that the degree of aggressiveness as measured by these variables would be consistent across groups. This hypothesis was supported by the Rorschach data; no conclusions could be drawn from the Hand Test data.

Acting-Out Ratio (AOR)

The AOR did not differ significantly across Groups I-III ($p \leq .25$). (No data existed for Group IV.) As mentioned previously, however, scores indicated that most subjects gave more affectionate responses than aggressive ones thereby producing ratios weighted in the opposite direction of what would be expected given a population of violent offenders. Thus, in the current study the AOR did not provide useful information pertaining to the assaultive potential of the subjects in the research.

Palo Alto Destructive Content Scale (PADS)

The PADS provides a single score which quantifies the amount of aggressive content present in a Rorschach protocol. It is of special use for the present research because its norms were developed using subjects who were found not guilty by reason of

insanity and are provided for subjects convicted of certain violent and non-violent crimes.

In the current study, there were no significant differences in the PADS scores across groups. Average PADS score was 1.77, somewhat low compared to Rose and Bitter's mean score of 2.3 for those committing violent crimes (1980).

Hypothesis IV

The fourth hypothesis suggested that subjects would not differ significantly across groups with respect to the demographic factors of race, age, education, occupation, or prior arrest record. In general, this hypothesis was confirmed.

In considering the chi square analysis of the variable of Race (see Table 12), no significant difference among groups was found ($p \leq .156$). In each of Groups I-III, there were more whites than blacks; Group IV was comprised of an equal number of whites and blacks. In examining data on occupation status, it can be seen from Table 13 that all groups were comprised predominantly of unskilled and skilled laborers. There were few professionals found in the entire sample of 120; the categories of "unemployed," "student," "clerical," and "armed services," in that order, accounted for all but three of the remaining subjects.

Subjects did not differ significantly across groups with respect to age ($p \leq .35$) as can be seen in Table 14. However, Table 9 suggested a trend for those in Group IV to be younger than the rest of the subjects (25.7 years compared to the average age of 27.3 years). This gap in ages was explained by analysis of the composition

Table 12

Pearson Chi Square:
Race

<u>Group</u>	<u>White</u>	<u>Black</u>	<u>Total</u>
I	16	14	30
II	22	8	30
III	21	9	30
IV	<u>15</u>	<u>15</u>	<u>30</u>
Total	74	46	120

Pearson Chi Square Value 5.217

D. F. 3

Probability $\leq .1566$

Table 13
Pearson Chi Square:
Occupation

<u>Group</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>VI</u>	<u>VII</u>	<u>Total</u>
I	2	18	4	1	0	3	3	30
II	1	14	11	1	1	2	0	30
III	5	8	11	1	2	1	2	30
IV	1	19	7	2	0	1	0	30
Total	9	59	33	5	3	7	4	120

Pearson Chi Square Value 23.896

D. F. 18

Probability $\leq .1585$

Occupational Category

- 1 -- unemployed
- 2 -- unskilled laborer
- 3 -- skilled laborer
- 4 -- clerical worker
- 5 -- professional
- 6 -- student
- 7 -- armed services

Table 14
Age, Education, Arrests of Groups I-IV

<u>Variable</u>	<u>F</u>	<u>Significance</u>
Age	1.094	.354
Arrests	1.183	.319
Education	.338	.798

of the Group IV sample some of whom were juveniles who had been "bonded up" to adult court due to the severity of their crime. Inclusion of these juveniles in the group lowered the average age for Group IV subjects.

Table 14 also indicates that subjects did not differ across groups with respect to number of prior arrests ($p \leq .319$) or educational level ($p \leq .798$). Average number of prior arrests, as can be seen in Table 9, was five; average educational level across subjects was tenth grade.

Hypothesis V

The fifth hypothesis examined the relationship of crime severity to a subject's use of mental status in trial. It asserted that those men found NGRI (Group I) would have committed crimes which were rated as less heinous than those of subjects in other groups. For the most part, data analysis supported this hypothesis.

Table 5 presents the various grouping systems for subjects. The previous hypotheses have examined subjects grouped according to the role their mental status played at adjudication. The fifth hypothesis examined subjects grouped in this manner, and also according to the facility in which they were housed.

Table 15 presents data on Heinousness of Crime. Subjects did not differ significantly across groups according to this variable when classified according to the role psychiatric pathology played in their adjudication ($F = 1.6$, $p \leq .185$). However, when subjects were grouped according to facility in which they were housed at the time of testing, significant differences were apparent. There existed a

Table 15
Heinousness Ratings

Adjudication:

F = 1.6 p = ~~4~~.185

Residence:

F = 3.573 p = ~~4~~.016

<u>Facility</u>	<u>Mean</u>	<u>S. D.</u>	<u>S. E.</u>	<u>95% Confidence Interval</u>
Chattahoochee	1.23	.89	.16	.89 to 1.56
Florida State Prison	2.07	1.11	.21	1.63 to 2.50
Close Se- curity	1.43	1.04	.18	1.06 to 1.81
County Jail	1.70	1.05	.19	1.30 to 2.09

trend for Chattahoochee subjects (all NGRI's) to show the lowest Heinousness scores (1.23) and Florida State Prison subjects the highest (2.07). Florida State Prison is the maximum security housing unit for the state prison system, containing all Death Row inmates. Many of those subjects who attempted the insanity defense but failed were housed at FSP due to the severity of their sentence; eight were on Death Row. There was no overlap between these two groups as shown by the confidence intervals of .39 to 1.56 for Chattahoochee residents and 1.63 to 2.50 for FSP inmates. Heinousness scores for Close Security and County Jail inmates fell between these two extremes. Thus, data analysis suggested support for the hypothesis that NGRI (Chattahoochee) inmates committed crimes rated as less heinous than the crimes committed by the subjects in the other groups.

Hypothesis 6

Hypothesis 6 suggested that NGRI subjects (Group 1) would appear significantly different from other subjects on a variety of psychological measures. It asserted that they would be differentiated from these other subjects by means of a prediction equation generated by a discriminant function analysis. A discriminant function analysis was performed using two groupings of subjects: NGRI's (Group 1, $n = 30$), and the combination of all other subjects ($n = 90$) into Group 2. The variables used in computing the linear classification functions were chosen in a stepwise manner. At each step, the variable that added the most to the separation of the groups was entered into the discriminant function; variables that added the least were also removed during the steps. Two classification matrices were produced from the analysis.

The standard matrix illustrated the percentage of correct classifications into groups and was based upon analysis of all 120 cases. In the jack-knifed matrix, each case was classified into a group according to the classification function computed from all the data except the case being classified.

Results are presented in Table 16. Means and standard deviations are presented in Appendix E, Table 24. The variables of Sum C (a measure of emotional control), Extended F+% (a measure of reality testing), and Heinousness of Crime were found to contribute significantly to the separation of the groups. All were significant at above the .01 level.

The classification matrix yielded the percentage of correct classifications into the two groups. Seventy percent of both groups were accurately classified using a function comprised of the three variables. (A classification rate of fifty percent would be expected by chance.) Thus, not even three-quarters of those found insane appeared identifiably different from other subjects. The jack-knifed classification matrix (Table 16) suggested that seventy percent of Group 1 and sixty-nine percent of Group 2 were correctly classified using the function. These correct classification rates suggested that other factors besides psychological pathology and lower crime severity were operating in many of the cases acquitted as NGRI.

Hypothesis 7

Hypothesis 7 asserted that subjects would be identified according to the role their mental status played in adjudication by means of a prediction equation based on a combination of psychological test

Table 16

Discriminant Function:
Group I vs. Group 2 (II, III, IV)

<u>Variable</u>	<u>F</u>	<u>U</u>	<u>D. F.</u>	<u>P</u>
Sum C	7.43	.94	1 118	$\leq .01$
Extended F+%	8.39	.87	2 117	$\leq .01$
Heinousness	9.04	.81	3 116	$\leq .01$

Classification Matrix

<u>Group</u>	<u>Percent Correct</u>
I	70.0
2	70.0

Jack-knifed Classification Matrix

<u>Group</u>	<u>Percent Correct</u>
I	70.0
2	68.9

Canonical Correlations

.43530

Coefficients for Canonical Variables

<u>Variable</u>	
Sum C	-.21683
Extended F+%	-.06004
Heinousness	-.61086

scores. Their institutional affiliation and the type of crime they committed would not be identifiable by means of prediction equations, however.

In general, the prediction ability of discriminant function analyses in the current study was poor. No matter which grouping system was used (see Table 5), subjects were not accurately classified by means of a prediction equation.

Role of Mental Status in Adjudication

As explained in Table 5, this grouping system classified subjects according to the role psychiatric psychopathology played in their defense. As seen in Table 17, the discriminant function that was generated consisted of a combination of three variables: Sum C (a measure of emotional control and acting out potential), Extended F+% (a measure of reality testing) and Heinousness of Crime (the rating for severity which was assigned to each individual crime). The classification matrix suggested that the function's predictive ability was poor. Twenty-five percent classification accuracy for the four groups would be expected by chance. Roughly fifty-seven percent of Group I subjects were classified correctly using the formula, as were forty-three percent of Group II subjects, thirty-three percent of Group III subjects, and thirty percent of Group IV subjects. The jack-knifed classification matrix yielded even poorer rates with Group IV subjects being correctly classified at roughly the level expected by chance.

Table 17

Discriminant Function:
Role of Mental Illness in Adjudication, Groups I-IV

<u>Variable</u>	<u>F</u>	<u>U</u>	<u>D. F.</u>	<u>P</u>
Sum C	4.46	.89	3 116	$\leq .01$
Extended F+%	4.05	.82	6 230	$\leq .01$
Heinousness	3.78	.75	9 277	$\leq .01$

Classification Matrix

<u>Group</u>	<u>Percent Correct</u>
I	56.7
II	43.3
III	33.3
IV	30.0

Jack-knifed Classification Matrix

<u>Group</u>	<u>Percent Correct</u>
I	53.3
II	43.3
III	30.0
IV	26.7

Canonical Correlations

.47749 .13307 .07060

Coefficients for Canonical Variables

<u>Variable</u>			
Sum C	-.24094	.16041	.04529
Extended F+%	-.05806	-.05051	.03873
Heinousness	-.55379	-.27940	-.75420

Residence

As explained in Table 5, this grouping system classified subjects according to the facility in which they were housed at the time of testing. Table 18 summarizes the results of the discriminant function which used Residence as the grouping criterion. Four variables were found to contribute significantly to the separation of the groups: Sum C, Heinousness of Crime, Extended F+%, and the Goldberg Original score ($L + Pa + Sc - Hy - Pt$, a linear combination devised to separate psychotic from neurotic profiles) (Goldberg, 1965). All were significant at above the .01 level.

Sixty percent of subjects at Chattahoochee, seventy-one percent of men at Florida State Prison, thirty-seven percent of subjects in Close Security, and only twenty-three percent of county jail inmates were correctly classified. The jack-knifed matrix yielded slightly lower figures of fifty-three percent, sixty-eight percent, thirty-one percent, and twenty-three percent respectively. Prediction equations functioned most poorly with respect to Group IV. This trend supported the concern previously raised that Group IV may not have been a useful or methodologically sound addition to the study. For this reason, discriminant function analyses were run using just subjects in Groups I-III (i.e. subjects in the hospital or in maximum and close security). County jail subjects were omitted.

Table 19 presents data of subjects grouped according to the role psychiatric pathology played at adjudication, minus the control group. Only two variables, Sum C and Extended F+%, were found to contribute significantly to the separation of the groups, both at the .01 level.

Table 18

Discriminant Function:
Residence, Groups I-IV

<u>Variable</u>	<u>F</u>	<u>U</u>	<u>D. F.</u>	<u>P</u>
Sum C	5.25	.98	3 116	<u>.01</u>
Heinousness	4.93	.79	6 230	<u>.01</u>
Extended F+%	4.95	.70	9 277	<u>.01</u>
Goldberg Original	4.89	.62	12 299	<u>.01</u>

Classification Matrix

<u>Group</u>	<u>Percent Correct</u>
Chattahoochee	60.0
FSP	71.4
Close Security	37.5
County Jail	23.3

Jack-knifed Classification Matrix

<u>Group</u>	<u>Percent Correct</u>
Chattahoochee	53.3
FSP	67.9
Close Security	31.3
County Jail	23.3

Canonical Correlations

.56574 .25479 .14237

Coefficients for Canonical Variables

<u>Variable</u>			
Goldberg Original	-.12445	.01039	.02609
Sum C	-.25131	-.01327	.05687
Extended F+%	-.14555	-.07169	-.00691
Heinousness	-.62238	.28360	-.70575

Table 19

Discriminant Function:
Role of Mental Illness in Adjudication, Groups I-III

<u>Variable</u>	<u>F</u>	<u>U</u>	<u>D.F.</u>	<u>P</u>
Sum C	6.63	.87	2 36	<u>5.01</u>
Extended F+%	6.38	.76	4 170	<u>5.01</u>

Classification Matrix

<u>Group</u>	<u>Percent Correct</u>
I	63.3
II	48.3
III	43.3

Jack-knifed Classification Matrix

<u>Group</u>	<u>Percent Correct</u>
I	56.7
II	44.8
III	43.3

Canonical Correlations

.47754 .14349

Coefficients for Canonical Variables

<u>Variable</u>		
Sum C	-.27580	.13267
Extended F+%	-.06168	-.05994

Sixty-three percent of Group I, forty-eight percent of Group II, and forty-three percent of Group III were correctly classified. The jack-knifed matrix yielded slightly lower figures of fifty-seven percent, forty-five percent, and forty-three percent respectively. These classification accuracy rates were slightly higher than those achieved when control group subjects were included in the analysis.

Table 20 presents data for subjects grouped according to the facility in which they were housed at the time of testing, minus the county jail subjects. The variables of Sum C, Extended F+%, Heinousness of Crime, and the Original Goldberg score were found to contribute significantly to the separation of the groups. All were significant at above the .01 level.

Sixty-seven percent of those at Chattahoochee, seventy-five percent of the Florida State Prison group, and forty-eight percent of Close Security members were correctly classified. This suggested that a better fit was achieved by this function than by the others, although accuracy was still not high. Jack-knifed classification yielded figures of sixty percent, seventy-one percent, and thirty-nine percent, respectively for the three groups.

Type of Crime

As seen from Table 5, subjects were also grouped according to the category of violent crime for which they were convicted: murder, rape, armed robbery, and aggravated assault/battery. Table 21 summarizes the results of the discriminant function for the 120 subjects using Crime as the grouping criterion. The variables of Heinousness of Crime and CF were found to contribute significantly to the separation of the

Table 20

Discriminant Function:
Residence, Groups I-III

<u>Variable</u>	<u>F</u>	<u>U</u>	<u>D.F.</u>	<u>P</u>
Sum C	7.91	.84	2 86	≤.01
Extended F+%	7.16	.73	4 170	≤.01
Heinousness	6.73	.65	6 168	≤.01
Goldberg Original	6.52	.58	8 166	≤.01

Classification Matrix

<u>Residence</u>	<u>Percent Correct</u>
Chattahoochee	66.7
FSP	75.0
Close Security	48.4

Jack-knifed Classification

<u>Residence</u>	<u>Percent Correct</u>
Chattahoochee	60.0
FSP	71.4
Close Security	38.7

Canonical Correlations

.60816 .28441

Coefficients for Canonical Variables

<u>Variable</u>		
Goldberg Original	-.02433	.00906
Sum C	-.25452	-.03303
Extended F+%	-.04463	-.07216
Heinousness	-.55820	.41431

Table 21

Discriminant Function:
Crime, Groups I-III

<u>Variable</u>	<u>F</u>	<u>U</u>	<u>D. F.</u>	<u>P</u>
Heinousness	5.29	.88	3 116	<u>.01</u>
CF	4.99	.78	6 230	<u>.01</u>

Classification Matrix

<u>Crime</u>	<u>Percent Correct</u>
Murder	25.5
Armed Robbery	60.0
Rape	45.8
Assault	51.7

Jack-knifed Classification Matrix

<u>Crime</u>	<u>Percent Correct</u>
Murder	10.6
Armed Robbery	60.0
Rape	45.8
Assault	51.7

Canonical Correlations

.41381 .23535

Coefficients for Canonical Variables

<u>Variable</u>		
CF	.49337	.52209
Heinousness	.81938	-.57297

groups. The CF score is a Rorschach variable which refers to the number of somewhat unstructured color responses in an individual protocol. CF is an element of the Sum C ratio, and serves as a related measure of a person's potential for uncontrolled emotionality. Both CF and Heinousness of Crime were significant at above the .01 level.

Classification according to type of crime was poor with twenty-five percent of the murderers, sixty percent of the armed robbers, forty-six percent of the rapists, and fifty-two percent of the assailants being correctly classified. Jack-knifed classification yielded percentages of ten percent, sixty percent, forty-six percent, and fifty-two percent respectively, according to crime. Classification of murderers fell below the chance level. These data supported previous research findings (Wolfgang and Ferracutti, 1967) that violent offenders were not distinguishable from each other on the basis of the type of crime which they commit.

In summary, prediction equations failed to achieve accuracy in classification of subjects according to residence, crime, or role of mental status at adjudication. In addition, Group IV subjects were consistently misclassified leading to the question of whether this group of subjects served as a viable control in the current study. These issues, and the issues raised previously in the Results section, will be considered in greater depth in the following Discussion.

CHAPTER FIVE DISCUSSION

This section will examine the implications of the results of data analysis in terms of the seven research hypotheses. Review of the findings from the pilot study for the present research serves as an introduction to this Discussion section. Suggestions for future research will be considered in light of the results of the present study.

Pilot Study

In the pilot study for the present research, Boehnert (submitted for publication, 1982) compared Groups I and II, those who had been found insane (NGRI) and those who had used the plea but had been found guilty, on a variety of psychological variables. Contrary to her initial expectations, she found that those who had been found NGRI appeared healthier on psychological tests than did those in Group II. The mean Group I MMPI profile was less elevated as a whole than that of Group II and only two clinical scales were above 70T as opposed to six scales for Group II. In addition, the only within-normal-limits profiles in the sample were all generated by Group I subjects. All MMPI's were analyzed regardless of validity configuration.

On the Rorschach Group I showed a less intense, more modulated reaction to emotional stimuli. Scores implied that the

Chattahoochee subjects paid greater attention to their environment, and placed greater emphasis on interpersonal relationships than did those in Group II. However, those in Group I appeared less able to structure their perceptions properly according to the demands of the external world than could those men in the prison system.

Boehnert cautioned against concluding too readily that there existed less personality disturbance in subjects in Group I than in Group II, pointing out that medication, treatment, and institution effects may be operating. Over fifty percent of the hospital sample were taking some form of psychotropic medication; very few Group II subjects were on any medication, most fearing it as a means of control by prison officials. Those in Group I (NGRI's) were receiving some amount of group or individual therapy as treatment while at the hospital; few in the prison system were receiving therapy of any sort. Finally, those men who had been housed at both Chattahoochee and the prison system unanimously agreed that the hospital was a much more pleasant place to be. There was more freedom of movement, more access to grounds privileges, and more access to females (both staff and patients) in the institution with an operating treatment philosophy as opposed to a punishment bias. The study hypothesized that these environmental differences may have significantly influenced the MMPI profiles of the two groups, as instructions required the subject to answer the questions according to how he felt at the time of the testing. The extent to which the Rorschach is affected by the external environment was uncertain.

A subset of individuals emerged who appeared psychologically different from the other subjects, consisting of those who tried the defense but were found guilty by a jury. On test data they appeared less psychotically disturbed, more intelligent, more aware of the demands of their environment, more violent, and less emotionally controlled than the other men examined. This group can be said to approximate most closely the dangerous, self-aware group of criminals to whom Yochelson and Samenow (1976) refer.

Thus, the pilot study provides a comparison of those subjects in Groups I and II. It was asserted that other data of significance might emerge when these subjects are examined as part of a continuum including those men merely examined with the possibility of using the insanity defense, and those men for whom the question of mental illness was never raised.

Hypothesis 1

Hypothesis I predicted that a continuum of psychopathology would be present across groups, with those using the insanity defense (Groups I and II) displaying the most severe symptoms. Men referred for psychological evaluation (Group III) would appear less disturbed, followed by those men for whom the question of mental disturbance was never raised. Of primary importance was the finding that this hypothesis was incorrect. There existed no neat continuum with Groups I and II at one end, and Group IV at the other.

MMPI Data

Figure I presents group MMPI patterns (n=120). All four groups generated group profiles which had elevations above 70T (in other

words, significantly elevated) on one or more scales. Scale 4, the Psychopathic Deviate scale, was elevated for all four groups, indicating that most subjects in the study endorsed items which suggested problems with authority and antisocial behavior. This would be expected given that all subjects had been convicted of violent offenses.

Group I presented an 8-4 pattern: persons with such a profile are often described as being odd, peculiar, or queer. "Crimes committed by persons with this profile are often senseless, poorly executed, and poorly planned and may include some of the most savage and vicious forms of sexual assault" (Welsh and Dahlstrom, 1972). Group II, with an 8-4-6-2-9-7 pattern (or "sawtooth" configuration) would be characterized as moody, unpredictable, resentful, and likely to display unusual qualities in their thinking, according to the MMPI interpretation. Such a profile suggests that although they might tend to act out hostility in psychopathic ways, many might lose contact with basic reality and deteriorate into florid psychosis (Welsh and Dahlstrom, 1972). Group III (those completing psychological evaluations), with an 8-4-9 profile, was characterized as a "mixed" group, with some members termed sociopathic and others labelled psychotic on the basis of their MMPI's. Acting out would be a major defense mechanism, as with other groups; and this group might be differentiated by its display of more obvious irritability, excitability, grandiosity, and lack of emotional control (Welsh and Dahlstrom, 1972). Group IV subjects, for whom the question of mental illness was never raised, showed a group

profile within normal limits except for a moderate elevation of the Psychopathic Deviate scale. This suggested the common pattern of rejection of authority, antisocial tendencies, and egocentricity: but the pattern lacked the suggestions of unusual thought patterns and potential for psychosis which characterized all other groups in varying degrees.

Figure 2 presents mean MMPI profiles for the four groups, using a "validity score cutoff" of ± 17 . As previously discussed, the F-K index subtracts the raw scale K score from the raw scale F score, and serves as a measure of the respondent's test-taking style. With a cutoff of ± 17 , F-K scores of over seventeen would be considered "faking bad" and would suggest a profile invalidated by the respondent's attempt to appear more pathological than was actually the case. Conversely, an F-K of -17 or greater would signify a "faking good" profile that would be considered invalid due to the level of the respondent's defensiveness and his/her tendency to deny faults and failings at the time of testing. Using this cutoff score, nineteen profiles were deemed invalid and omitted from analysis in the group profile and Goldberg data.

As can be seen from Figures 2 and 3, little difference in the profile code types emerged when the invalid profiles were omitted. Profiles for all four groups showed a Scale 4 (Psychopathic Deviate) elevation regardless of validity configuration. The major differences appeared to be in the level of the elevation of the Schizophrenia, Paranoia, and Depression scales, especially for those attempting the defense and being found guilty (Group II).

Omission of some invalid profiles reduced the levels of those three scales, though they were still above 70T and thus significantly elevated. When the more stringent F-K cutoff score of ± 11 was applied to the data (Figure III), seventy profiles remained but basic interpretation of the code types remained the same. Analysis of code types using all three validity indices suggested antisocial and psychotic features present in the group profiles of those in Groups I-III, and a clearcut psychopathic profile for those in Group IV. Thus, in the current study, analysis of the data using no validity cutoff score, and F-K index score of ± 17 and ± 11 suggested that the interpretation of the code types for each group profile remained similar, regardless of validity cutoff applied. However, it must be remembered that the figures present group MMPI's, not those for individuals. In evaluations which examine an individual defendant, it would seem advisable to adapt the assertion of Grow (1980), who advocates the use of stringent MMPI validity cutoff scores based on his analysis of patterns of defensiveness of men undergoing court-ordered evaluations.

Certain trends appeared when the Goldberg scores were examined across groups. Goldberg scores derived from the linear combination formula $L + Pa + Sc - Pt - Hy$ are asserted to accurately distinguish psychotic from neurotic profiles. Scores over "55" are classified as Psychotic; scores under "35" are classified Neurotic; those falling between "35" and "55" are labelled Indeterminant (Goldberg, 1965). As can be seen from Table 6, Goldberg Original mean scores for all groups fell in the Psychotic range (64-71).

In other words, this formula yielded data which suggested that regardless of the stringency of the validity criteria, the mean profile for each group was a psychotic one. The means were higher than those cited in Shagoury (1971), in which the author compared those convicted of violent and non-violent crimes. In that study, there existed a trend in the direction of greater psychopathology and higher Goldberg scores found in the group convicted of a violent crime as opposed to a property crime. Shagoury also conducted this research on inmates in the Florida prison system. However, he did not have access to those in maximum security, so his group of murderers was limited to those who were deemed "manageable" in general population. This selection bias may account for the higher scores found in the present research, since maximum security inmates were found in all groups.

Two additional Goldberg rules exist (Goldberg, 1972). The first rule ($Hs + 2Pd - Ma$, or Goldberg I formula) provides a cutoff score of 123 to discriminate deviant from normal profiles. Scores over 123 are labeled as deviant, under 123 are labeled normal. As might be expected, all mean Goldberg I scores for the four groups fell into the deviant range (135-147), regardless of whether validity configuration was taken into account (Table 6).

The second additional Goldberg rule ($2Pd - Hy - Sc$ or Goldberg II formula) purports to distinguish psychopathic profiles from psychiatric ones. With this formula, any cutting score above ten is suggestive of psychopathy; below ten suggests psychiatric disturbance. In the current study, many scores fell within the negative

range of numbers. Therefore, for purposes of computer coding, the author added one hundred to the score of each Goldberg II figure. This accounted for the extremely high numbers found in Table 6. In examining this table, it can be seen that when all profiles were considered, Groups I, II and III had Goldberg II mean scores within the psychiatric range (7.9, 9.7, and 6.3 respectively). Group IV, on the other hand, had a mean score of 17.6, falling squarely within the psychopathic range. These differences were not statistically significant when an F-K cutoff score of ± 17 was used, and when all profiles were analyzed. However, this trend was statistically significant in the analysis of the seventy profiles deemed valid using an F-K of ± 11 . Such findings, using the Goldberg II cutoff rule, were compatible with the previously presented mean group profiles. The profile for Group IV had only one elevation, on the Psychopathic Deviate scale; the other group patterns all have at least one psychotic scale elevation as well.

Rorschach Data

In the present study, some Rorschach variables proved to be the best discriminators among groups of any variables; other Rorschach scores showed remarkable consistency across subjects. As can be seen in Table 9, the average F% across groups was 24%; suggesting a tendency on the part of the subjects to pay less than normal attention to environmental cues. The average F+% was 69%, indicating some impairment in reality testing with respect to objective environmental stimuli. The average Animal percentage was 48%, suggesting immaturity. The M (human movement) score average

was two M responses per subject, a somewhat low score on this measure which purports to represent capacity for empathy. Most subjects averaged a 33% response rate for Cards VIII, IX, and X, a score pertaining to a person's degree of emotional responsivity. None of these variables differed significantly across groups. Taken as a whole, such scores suggested that a mean profile for a subject in any group would reflect a lower than normal response to tangible environmental stimuli accompanied by a tendency for these responses to be subjective, over-personalized, and inappropriate. In addition, subjects appeared to be impulsive and immature, and somewhat lacking in empathy; although they responded adequately to emotional stimuli.

The average Palo Alto Destructiveness Content Scale Score across groups was 1.77, somewhat low compared to what might be expected given the Rose and Bitter (1980) data. However, in the current study there existed a large amount of within-group variability (average standard deviation was .43) with scores in each group ranging from 1.0 to 3.6. It must be concluded, therefore, that although many of the profiles across groups lacked a great amount of aggressive content, many subjects across groups generated destructive responses far in excess of the norms cited in Rose and Bitter (1980).

The variables of Sum C (a measure of emotional control) and Extended F+% (an indicator of reality testing ability) differed significantly across groups (see Table 10). Group II (those who relied on the insanity defense but were found guilty) appeared to have the highest Sum C (5.9) of any of the groups, with a suggestion that most of the lower Sum C values were found in Group I. Sum C,

determined by the formula $\frac{FC + 2CF + 3C}{2}$ serves as a measure of emotional reactivity, impulsivity, and control. A higher value suggests heightened sensitivity to emotion-arousing stimuli with an accompanying impulsiveness and loss of control. On the other hand, the Extended F+% considers what percentage of responses in the protocol were of positive form level. This score provides information as to the extent to which a subject is able to perceive his world as others do and conform his perceptions to the structure imposed on him by the blot. All group means were above seventy-five percent, thereby suggesting that the mean score for each group did not fall into the range of values suggestive of psychosis. Group I appeared to have the lowest mean (75.3%), a value which bordered on being suggestive of thought disorder.

These variables suggested a tendency for emotional lability, strongest in Group II, least in NGRI's, but present to some degree across groups. Those in Group I manifested some difficulty in seeing the world as others do, though not appearing frankly psychotic. The other group means were not suggestive of thought disorder, and were essentially within the normal range for form level.

As a whole, Rorschach data were compatible with what might be expected given the literature. Few human movement responses have been associated with a lack of empathy and distance in interpersonal relationships. High Sum C may be suggestive of emotional lability, volatility, and explosiveness (Klopfer, 1962). These qualities, as well as immaturity and lack of attention paid to external environmental cues, are compatible with both the theory and data reported

in the projective literature on the protocols of violent criminals. Studies on other acting out populations, such as older juvenile delinquents and violent alcoholics (Curtiss, 1979; Haramis and Wagner, 1980) cite impulsivity, reactivity to color on the Rorschach, and low M scores as being significantly related to a history of more serious antisocial behavior. Those in our society who lack empathy for others, are distanced and superficial, with tenuous emotional control and egocentricity, are often described as being psychopathic (Schlesinger, 1980). These qualities combined with the over-responsivity to emotional factors, and explosivity suggested by the color responses, suggested an individual whose acting out potential and capacity for harm to others may approach unusually dangerous proportions during those times in which he is out of control, and responding affectively to a situation.

Intelligence Testing

Intelligence scores did not differ significantly across groups. Mean IQ for all subjects was 96.0, with group means ranging between 90 and 100. Thus, scores fell in the average range of intelligence. There was much variability within groups, with an average standard deviation of almost thirteen points, indicating that many subjects could be classified as falling into the Dull Normal and High Average ranges of intelligence. These results should not be interpreted to mean that the retarded were not present in the prisons or hospitals for the criminally insane. Rather, those with IQ's below 78 were excluded from this study because of the comprehension level required for valid MMPI administration (over fifth grade reading comprehension level).

Other Projective Testing

Appendix A provides scoring criteria for House-Tree-Person drawings. Scores did not differ across groups, and the sets of drawings appeared to offer little in themselves in the way of either description or prediction of violent behavior. This is not to say that for a given subject, drawings might not provide additional verification of aggressive or inappropriate sexual tendencies when taken in combination with other data. (An example of such verification was a set of drawings done by a child molester/killer, most of which depicted sex acts in various stages between adults and children. Most subjects were more guarded and less blatant in their drawings).

Hand Test data (for those men in Groups I-III) were also not found to be of assistance in either descriptive or predictive capacities. There was tremendous variability within groups. Most subjects were somewhat hostile to the idea of the test, and were rather guarded in their responses. Acting out ratios (AOR) for the ninety subjects on which data were available tended to be more heavily weighted in favor of nurturing types of responses (such as "dependence" and "affection") rather than the aggressive responses ("direction" and "aggression"). This was the opposite of what would be predicted given that the current research sample was composed exclusively of men with a history of violent behavior (Haramis and Wagner, 1980; Wagner, 1969). Pathology scores were not high for most subjects, with a few exceptions. It appeared that with some testees, the Hand Test provided confirmatory evidence of thought disorder or elaborate violent fantasy material: such pathology was also very evident in the other test data

for the subject. Rarely if ever in the present study did the Hand Test provide suggestions of bizarre or violent tendencies which were not already present in behavior or other test material of a given subject.

Hypothesis 2

Hypothesis 2 predicted that most if not all test profiles in Groups III and IV would be psychopathic rather than psychotic ones. This was too sweeping a generalization and hence was not confirmed as a hypothesis. What was concluded from examining the test data for Groups III and IV as a whole, however, was that Group IV appeared sociopathic rather than out of contact with reality on MMPI and Rorschach variables. Subjects in that group displayed a spike 4 mean MMPI profile, and Rorschach scores which did not fall in the psychotic range. Group III data were more equivocal, with the probability of varied diagnoses of "schizophrenic" and "psychopathic" being applied on the basis of the mean 8-4-9 MMPI profile. Goldberg scores for the MMPI classify the profile as "psychiatric" rather than "psychopathic." On the other hand, Rorschach data were compatible with an explosive, labile, immature individual who does not pay close attention to environmental cues but who is not evidencing a thought disorder. In conclusion, although Group IV subjects appeared psychopathic as opposed to psychotic, the same cannot be said for Group III. The latter group did not present a clearcut picture, and test data suggested indications of both sociopathic and more bizarre, disordered ways of interacting with the environment. This supports research evidence which detected significant pathology

in those referred for competency/sanity evaluations (Binns, 1969; Siomopoulos, 1976); and contradicts assertions on the part of some prosecutors that evaluations serve as a "cover" to build a case for the insanity of a criminal who is not mentally disturbed (Pasewark, 1980; Yochelson and Samenow, 1976).

Hypothesis 3

Hypothesis 3 investigated the performance across groups of the "violence indicators" of the Hand Test variables and the Palo Alto Destructiveness Content Scale. It posited that the level of assaultive potential would be consistent across groups, as all subjects had been convicted of violent offenses. For the most part, this hypothesis was substantiated.

The lack of utility of the Hand Test in this study has already been discussed, and will not be considered further. The Palo Alto Destructiveness Content Scale (PADS) involves scoring each response on the Rorschach for its level of destructive aggression. Both free association and inquiry are scored according to a five category system ranging from non-destructive responses through "movement in which the action is explicitly destructive in nature, such as stabbing, shooting, or some other aggressive characteristic" (Rose and Bitter, 1980, p. 230). As can be seen from Tables 8 and 9, there existed no significant difference across groups on the PADS variable ($p = .25$). Average score was 1.77, substantially lower than the 2.3 score cited for violent offenders by Rose and Bitter (1980). This difference might be explained in one of three ways: that the current researcher did not apply scoring criteria in exactly the same way as did Rose and

Bitter, that the samples were indeed different, or that the variability in the current sample masked the severity of many of the scores. Average variability across subjects was .43, suggesting that there existed a considerable range of scores. Many in each group in the present study achieved scores significantly above the 2.30 score for Rose and Bitter murderers: one such subject, convicted of murder and housed in maximum security, was given a 3.9 score. Without comparing actual protocols used for the development of the Rose and Bitter norms (1980) with those in the present study, it is not possible to ascertain whether the differences between the two studies represent existing differences in examiners or in subjects; or whether simple statistical artifact in the form of overly small sample sizes is responsible. Further research might address this issue of the dissimilarity of PADS norms across studies.

Hypothesis 4

Hypothesis 4 suggested that the subjects would not differ according to demographic factors. In general, this was found to be true. Table 12 presents Pearson chi-square data for distribution of race, which did not differ significantly across groups. There were more whites than blacks in all groups except Group IV, which had equal numbers. Boehnert (submitted for publication, 1982), in comparing Groups I and II on the variable of race, concluded that in her sample slightly more whites had failed with the defense than had blacks, with twenty-one white and nine black men in Group II. Steadman (1981) in looking at all those in New York State who successfully used the plea between 1965 and 1978, found whites to be over-represented

in comparison with the state prison population, with sixty percent white as compared to thirty-one percent black. He did not cite data on the racial distribution of the group of subjects who failed in the defense. As the present study did not have data for all men attempting the defense or being evaluated for it in Florida, it was not possible to determine whether there existed a racial bias in decision-making as to who was evaluated, who tried the defense, and who was acquitted. Data did indicate that if such a bias existed, it was not clearcut against either race, as both had members who were evaluated, and who succeeded and failed in the defense.

Table 13 shows that the majority of men in all groups were skilled or unskilled laborers. Only three men out of 120 were professionals. This composition was compatible with the compositions of both prisons and hospitals mentioned in other studies, which showed a high percentage of laborers, and low percentage of higher SES, professional persons (NYDMH, 1978; Steadman and Coccozza, 1974).

Age did not differ significantly across groups, with most subjects being in their middle to late twenties. There existed a slight tendency for those in Group IV to be younger. This trend was explained by the fact that Group IV inmates were from a county adult detention facility, a facility which also held many juveniles who had been certified to adult status because of either their prior records or the severity of their crimes. Inclusion of some of these juveniles thus lowered the mean age of Group IV. Education was also similar across groups, with mean educational level for all subjects being completion of the tenth grade. Subjects did not differ across

groups for arrest rates. Number of prior arrests ranged from zero to twenty-three. Of interest was that many of the murderers had no previous arrest history, a finding compatible with Shagoury's study (1971) which found some murders to be committed as "crimes of passion" by men who were not known as criminals or as mentally ill.

Hypothesis 5

Hypothesis 5 asserted that those found "not guilty by reason of insanity" would have committed crimes which were rated as less heinous than those of subjects in other groups. For the most part, data analysis supported this hypothesis. Table 15 presents data on Heinousness of Crime. Subjects did not differ significantly across groups according to this variable when classified according to the role psychiatric pathology played in their adjudication. However, when subjects were grouped according to the facility in which they were housed at the time of testing, significant differences were apparent. There existed a tendency for those at Chattahoochee (NGRI subjects) to show the lowest Heinousness ratings, and those at Florida State Prison to show the highest. Close security and the county jail inmates fell in between.

Florida State Prison, as mentioned previously, is the state's maximum security housing unit, containing all Death Row inmates. Many of the subjects who attempted the insanity defense but failed were housed at Florida State Prison due to the length of their sentence or assessed potential for aggressive acting out; eight of these were on Death Row, having committed some of the most notorious of Florida's capital crimes. (Indeed, a list of aggravating and mitigating

factors is considered in sentencing on a capital crime, with the greater number of aggravating factors weighting the decision in favor of the death penalty). Data suggested that many of these men who tried the insanity plea and failed, had committed especially heinous acts for which they were sentenced to death (and housed at FSP). Consideration of test data for these men suggested a moderate to high degree of disturbance present among them, with many complete protocols combining elements of thought disorder, psychopathy, and explosive acting out potential. Clearly, test data alone suggested that some might have met criteria for an acute psychosis, and perhaps, lack of responsibility. Others might belong to the subgroup of Group II that emerged in the pilot study; which was comprised of dangerous, clever con men who appeared more psychopathic than psychotic, and who possessed an extremely high potential for violent acting out. Yet all the men in both of these subgroups were found guilty. The higher Heinousness scores lent support to the assertion that some factors other than mental state at the time of the act may be influencing insanity defense acquittals and failures (cited in NYDMH, 1978). Current data suggest that there may exist some crimes so heinous that the community opts for punishment/protection over strict interpretation of the law.

The presence of the trend whereby those at Chattahoochee (the acquitted NGRI's) had the lowest blind ratings for heinousness of the four groups supported the notion of a "community tolerance threshold." Those who committed crimes which fell below the limits of this tolerance level and did not trigger as much community outrage appeared

to be more readily acquitted "not guilty by reason of insanity." Of interest was the fact that there existed no overlap between the Heinousness scores for the NGRI subjects and those for the maximum security inmates. Ninety-five percent confidence intervals indicated that NGRI subject scores ranged between .89 and 1.56, and maximum security inmate scores fell between 1.63 and 2.50. This difference was clearly significant, and emphasized the strength of this factor of crime severity in judicial adjudication of the offender.

Hypothesis 6

Hypothesis 6 suggested that those found insane would appear predictably different on a variety of psychological measures from the majority of those in the prison system; just as the irresponsible mentally ill would theoretically differ from responsible, dangerous criminals. It was asserted that these men could be differentiated from the other subjects by means of a prediction equation generated by a discriminant function analysis.

Boehnert (submitted for publication, 1982) reviewed behavioral observations and test data for those in Groups I and II on a case-by-case basis; and by virtue of her clinical impressions concluded that the "system" was in fact working quite well, assigning eighty-six percent of the subjects to either hospital or prison correctly. Classification rates in the present study, generated by discriminant function analysis, were at the seventy percent level for both groupings. Since a fifty percent valid positive rate is expected by chance, it appeared that the prediction equation did not yield highly accurate discrimination between groups. Although a seventy percent discrimin-

ation rate implied that there existed some quantitative differences between NGRI's and others which allowed for separating the former from the criminal population, not even three-quarters of those found insane appeared identifiably different on the basis of their psychological test scores. Other factors besides pathology or generally lower heinousness of crime might have been operating in many of the individual cases acquitted as NGRI. Conversely, many in the prison system were classified as meeting discriminant function criteria for Group I. A case-by-case analysis was performed to suggest reasons behind both types of misclassifications.

In examining those subjects who were not assigned to their proper groups on the basis of the applied function, test data and details of crime were reviewed. It appeared that Group IV subjects had the highest rate of being misclassified, with thirteen out of thirty "misses." As has been discussed in the Methodology section, this group was subject to methodological criticism in its role as a control group and the following discussion will analyze only subjects from Groups I-III.

As seen in Table 22, four categories of misclassifications emerged. The first was termed "Computer Misses"; those subjects who appeared in every way to meet criteria for their correct group, but who nonetheless were misclassified by the function. In Group I, this would be a subject whose crime was not overly violent, and whose test data showed more psychotic features than features associated with unstructured emotionality and lack of control. Group II subjects would have committed a more serious type of crime and would be consistent in both data and

Table 22

Discriminant Function Misclassifications:
Hospital vs. Prison Group Subjects

<u>Type of Error</u>	<u>Group I</u>	<u>Group II</u>	<u>Total</u>
"Computer Miss"	1	7	8
"Valid Miss"	3	4	7
MDSO	3	1	4
"Borderline"	3	3	6
	10	15	25

behavior with someone with marked violent and psychopathic tendencies. In this "Computer Miss" group, there was one NGRI subject, and seven prison subjects

The second category involved "System Misses": those men who appeared to meet criteria for a certain group, but who were adjudicated otherwise by the court. In Group I, there were three such subjects who appeared to have been more properly assigned to a prison group, and whose classification by the computer supported this impression. In the non-hospital group, four men appeared to have been "System Misses." All were acutely psychotic or close to decompensation when examined: their condition made three of them quite vulnerable within the prison system (one being blind and infirm as well). The fourth was being maintained on Thorazine (a major antipsychotic medication) and had just been released from the prison Neuropsychiatric Ward at the time of examination. He was intermittently psychotic during the testing; and repetitively threatening to the examiner, explaining that he had "nothing to lose" by killing her. He had been convicted of a rape-murder, and had tried the insanity defense but failed. It was the examiner's impression that he may have met M'Naughten criteria at the time of the crime; but that he was perceived as being dangerous and unpredictable enough such that protection of the community became the highest priority.

The third category involved those men for whom an adjudication of "MDSO" (under Florida's Mentally Disordered Sex Offender statute) may have been more appropriate. Three in the hospital and one in the non-hospital group appeared to have been better considered for sex

offender status than for involvement in the question of moral responsibility. These men were not retarded or psychotic, knew the difference between right and wrong, and showed a history of behavior characterized by repetitive sexual acting out.

The fourth category was termed "Borderline": those men who showed "mixed pictures" that qualified them for either group. Three men in each group were classified in the "Borderline" category and were the individuals whose adjudications depended most on the "idiosyncracies" of their particular jurisdictions (Pasewark, 1979). Finally, there were a few individuals for whom none of the four subgroupings was appropriate.

The above categorizations were based on the clinical opinions of the author. Temporarily ignoring the actual court adjudications, it may be useful to investigate how the classification function performed assuming that the clinical opinion regarding placement was the deciding factor in the insanity decisions. It appeared that the men in the "Borderline" and "System Misses" categories would not be justifiably considered as misclassifications by the function. They appeared to be appropriate for the group in which the computer placed them when examined on a case-by-case basis. If their numbers (six for Group I, seven for II) were added to those in the correct classification, the "hit rate" of the function would be brought to 90% for Group I (hospitalized subjects) and 77% for prison subjects. Thus, it would appear that the function was able to predict quite well subjects who were the most appropriate for adjudication as "insane", if adjudication were solely based on (or controlled by) the opinion of the mental health

professional (as claimed by Dix, 1981). That the court in thirteen of the cases disagreed with the author was not surprising, given the frequent complaint by forensic experts that the trier-of-fact ruled against their proffered opinion (Geller, 1980; Halpern, 1977). The data supported the contention of Hoffman (1981) that the court does not blindly obey psychiatric experts. In the current study, the trier-of-fact appeared to be doing what it was mandated to do: to consider testimony of experts along with evidence of other sorts, and then to render an opinion based on examination of all of the data. That such an opinion at times concurred with and at times deviated from that espoused by the mental health professional was to be expected in a court system which considered psychiatric testimony as only part of the case.

Hypothesis 7

Hypothesis 7 asserted that subjects would be identified according to the role their mental status played in adjudication by means of a prediction equation based on a combination of psychological test scores. Their institutional affiliation and the type of crime they committed would not be identifiable by means of prediction equations, however.

In general, the prediction ability of discriminant function analyses in the current study was poor. The discriminant function which attempted to predict the role mental status played at adjudication was made up of a combination of three variables: Sum C (a measure of emotional control), Extended F+% (a measure of reality testing) and the Heinousness of Crime score. Twenty-five percent classification accuracy for the four groups would be expected by

chance; and 57% of Group I subjects, 43% of Group II subjects, 33% of Group III subjects, and 30% of Group IV subjects were classified correctly by the formula (Table 17). Omission of Group IV subjects from analysis yielded only slightly better classification rates (Table 19).

These findings suggested that on the basis of psychological and demographic characteristics alone, those attempting the insanity defense did not appear predictably different from those opting not to use the defense after being evaluated for competency/responsibility. They also indicated significant overlap in characteristics of individuals succeeding in, failing at, and being evaluated for the insanity defense; and suggested that even given a certain degree of personality psychopathology, there was no way of predicting from the data whether a person would meet criteria absolving him of moral responsibility. This confirms the assertion that the legal term "insane" is not comparable to any specific psychiatric entity or list of psychological deficits (Becker, 1973; NYDMH, 1978); and counters the allegation that courts "rubber-stamp" the verdict of pathology from a mental health professional (Dix, 1981; Halpern, 1977). Taken as a whole, these negative results thus implied that factors other than psychological or demographic ones played a significant role in the workings of the insanity defense, confirming Steadman's (1981) and Pasewark's (1979a) observations to this effect. Further research is needed to explore what these factors may be, as the current study did not include policemen or mothers who killed their children, two groups which Steadman found to be inappropriately

adjudicated "not guilty by reason of insanity."

Other Trends

No matter how subjects were grouped, functions did not accurately predict category membership. Certain trends emerged when functions were examined as a whole, however. First, in reviewing all discriminant functions conducted, it was apparent that the same few variables contributed to prediction in all analyses. For the most part, Heinousness of Crime and the Rorschach variables of Sum C and Extended F+% were the scores on which groups differed. This was similar to the finding in the pilot study (Boehnert, submitted for publication, 1982) which found the Rorschach variables of Sum C, F%, and Extended F+% to be the most helpful in distinguishing between groups. The Rorschach again proved to be a sensitive instrument for detecting subtle differences among violent offenders.

A second trend of interest was the positive correlation between the variables of Rorschach Sum C and the Heinousness of Crime score. There existed a suggestion in the present study that those subjects identifiably different from others had a higher heinousness rating and a higher Sum C score than other subjects. Theoretically, the concepts of emotional over-reactivity (with potential for uncontrolled acting out) and heinousness of crime appear related. Further research, and the development of a more sophisticated Heinousness of Crime scale, could investigate whether this combination is operating in practice.

Another important feature was the consistently poor rate of prediction for Group IV subjects, those controls matched on type of crime and housed at Alachua County Corrections Center, for whom mental

status had never been raised as a legal question. When compared according to the role mental status played at trial (26% correctly classified) or according to residence category (23% correctly classified) the group did not appear to "make sense" statistically. A question was raised previously as to whether such subjects should be considered comparable to prison inmates who lacked overt pathology. There existed many institutional differences between the county facility and a state prison which could have created very different environmental effects for the subjects. To ascertain whether the inclusion of this group was masking existing differences, Group IV subjects were omitted from some analyses; discriminant function rates then appeared significantly better. Institution membership was predicted with much better accuracy, with 66% of Chattahoochee, 75% of FSP, and 48% of close security subjects being correctly classified. FSP inmates appeared identifiably distinct from others, having the best classification rate. Some explanation for this was afforded by consideration of which variables were contained within the function. Heinousness of Crime and Sum C were two of the four variables; and were the two previously mentioned variables on which groups differed significantly, with FSP inmates tending toward having the highest scores. It appeared that the county jail inmates did not serve a viable function as an appropriate control group.

Finally, prediction equations were unable to predict the type of violent crime which a subject committed based on a statistical combination of his psychological test scores. Only 10% of murderers, 60% of armed robbers, 45% of rapists, and 51% of assailants were correctly

classified. This supported what other researchers have asserted (Rose and Bitter, 1980; Terrill and Holland, 1981); namely, that test instruments are not capable of differentiating type of violence, nor are they designed to do so. They cannot be expected to predict a complex set of behaviors, such as violence, which is influenced not only by psychological factors, but by situational and cultural ones, among others (Monahan, 1978). From this standpoint, it was not surprising that psychological measures were unable to discern the person who killed his victim from the person who seriously attacked another.

CHAPTER SIX CONCLUSIONS

The aim of the present study was to explore similarities and differences among groups of men involved with the insanity defense. Psychological and demographic data were generated which yielded information on the psychological characteristics of men for whom emotional disturbance was raised as an issue at trial; and on the process of the "system" in general. The following conclusions were drawn from examining the research as a whole.

1) All four groups displayed a significant amount of psychopathology, on both objective and projective personality tests. Group MMPI's all showed elevation on the Psychopathic Deviate scale: MMPI's of Groups I-III had elevated Schizophrenia scales as well. Rorschachs for most men across groups were characterized by immaturity, lack of emotional control, poor attention to environmental cues, and lack of empathy.

2) Those in the control group were the only subjects to display a consistently psychopathic profile on test data. They displayed a 4-spike pattern on the MMPI, and did not show clearcut psychotic indications on the Rorschach. The other groups presented a more "mixed" picture, with both psychopathic and psychotic features, and a high potential for aggressive acting out. Those men who tried the

insanity defense but were found guilty tended to have the highest Sum C and Extended F+% scores, implying adequate reality testing with potential for explosive emotionality and lack of control. Subjects adjudicated "not guilty by reason of insanity", in contrast, tended to show the lowest Extended F+% and Sum C scores; suggesting more tenuous reality ties, and less emotional lability.

3) For the most part, subjects did not differ on demographic factors. Most were unskilled or skilled laborers, with few representatives of the professions. This is compatible with Steadman (1981) and the New York study on characteristics of NGRI's. Average educational level for all four groups was the tenth grade. Most subjects were in their twenties, with some prior arrest history.

4) Those subjects found "not guilty by reason of insanity" were discriminated from all others in the sample at the seventy percent level of accuracy. A case-by-case analysis further suggested that an even higher percentage (ninety percent) of them were correctly classified according to the author's clinical impression. That the trier-of-fact did not agree in all cases with psychological opinion was seen as a positive indication that the "system" is not controlled by the judgments of mental health professionals, as Dix (1981) asserts.

5) In general, the extent to which mental disability was relied upon as a defense at trial was not equatable with a certain level of personality pathology. NGRI defendants did not appear more pathological than those unassociated with the defense. This lent further support to the notion that "insanity" and "pathology" are not interchangeable terms (Becker, 1973). Thus, a legal verdict could not be predicted by

examination of the level of personality malignancy. This evidence supported the continued separation of the legal concept of "lack of moral responsibility" and the psychiatric concepts of "psychosis" or "pathology." This suggested that factors other than psychological and demographic ones were playing a role in the adjudication of moral responsibility.

6) There appeared to be a "community tolerance threshold" operating in insanity acquittals, with those committing crimes which fell below the limits of this tolerance level being more readily acquitted NGRI. Conversely, there emerged a tendency for those committing crimes with especially high heinousness ratings to have been found guilty and housed in maximum security or on Death Row. It appeared that some crimes were perceived as being so heinous that the community opted for punishment/protection over strict interpretation of the law. The perpetrators of those crimes may resemble those in the pilot study who appeared more psychopathic than psychotic, and who possessed an extremely high potential for violent acting out.

7) In analyzing subjects according to the type of crime they committed, it appeared that psychological testing did not differentiate between types of violent crime. This is compatible with other research in the area, which asserts that a complex set of behaviors (such as violence), is influenced not only by psychological factors, but by situational and cultural ones. Therefore, it is not surprising that psychological measures were unable to discern the person who killed his victim from the person who seriously attacked another (Monahan, 1974; 1978).

8) Hand Test data were not found to be helpful in discriminating between groups, or in describing violent individuals in general. The Acting Out Ratio (AOR) for most subjects, in fact, was found to be in the opposite direction than what would be expected given a population of violent individuals; i.e., the AOR was characterized by affectionate responses more than aggressive ones. House-Tree-Person drawings did not discriminate between groups but provided information about the subject which was consistent with information gained from the Rorschach.

9) For the most part, the Heinousness of Crime score and the Rorschach variables of Extended F+% and Sum C contributed the most heavily to the discrimination of groups. This was similar to the finding in the pilot study (Boehnert, submitted for publication, 1982) which found the Rorschach variables of Sum C, F%, and Extended F+% to be the most helpful in distinguishing between groups. The Rorschach appeared to be a useful and sensitive instrument in detecting subtle differences between violent offenders. In addition, in the present study there existed a trend for Sum C and Heinousness of Crime to be positively correlated. (That is, a higher percentage of uncontrolled emotional acting out was related to the brutality of the crime committed). This could be better tested with the development of a more sophisticated Heinousness of Crime scale.

10) Three directions for future research appear promising. First, more information is needed on the relationship of heinousness of crime to the adjudication of insanity, for which a more detailed scale needs to be derived. Second, the present study could greatly benefit from the inclusion of a group of non-violent subjects. Other research

(Rose and Bitter, 1980) asserts great differences found on objective and projective personality testing between violent and non-violent offenders. Testing of the efficacy of the Palo Alto Destructive Content Scale could be facilitated with the inclusion of this property crime group. Third, a replication study should be conducted which considers non-psychological factors specific to individual cases which could affect the adjudication of insanity in particular jurisdictions.

APPENDIX A SCORING CRITERIA FOR DRAWINGS

What elements shall we consider in gauging the level of aggressive potential? Let us summarize some of the signs which are widely recognized as pointing to externally-directed hostility and aggression in the HTP. They include:

- a) unrelieved enclosed areas of white space (e.g. windows without panes, curtains, or shutters), "keyhole" tree;
- b) two-dimensional branches resembling clubs, or sharply pointed branches or leaves; chimney excessively prominent, black smoke belching forth;
- c) mutilated content or degraded House, Tree, or Person; degrading details symbolizing aggressive hostility (e.g. an outhouse drawn beside a mansion, a garbage can on the front porch, a dog urinating against the Tree);
- d) the Person of the same sex as the subject depicted with sharply pointed appendages (e.g. fingers, toes, teeth); the Person of the same sex in explicitly aggressive posture or action.

(Hammer, in Jacks, 1969, pp. 295-314)

Three-point scoring system on each of above four criteria for each of four drawings by the subject:

- 2: Markedly present
- 1: Present though not to great extent
- 0: Not present

Range: 0-32

APPENDIX B
DETAILS OF INDIVIDUAL CRIMES

Group I

#11: Believed that a man was his enemy who had prophecied that the victim would kill him. He saw him two days in succession in the woods, believed his life was in danger so shot him once in the neck.

#38: Molested the six- and seven-year old girls he was babysitting. He gave them venereal disease and does not remember the actual intercourse.

#80: Was on a trip to the Florida Keys after he left the service. At a restaurant, when the cashier asked for payment, he pulled out a knife and stabbed the cashier to death.

#23: He beat his wife and three children to death with an undiscovered blunt, covered instrument.

#5: A man advanced on him with a knife, so he disarmed him and stabbed him to death.

#4: Committed a homicidal attack with a knife on a total stranger who he believed had called him a punk. When a police officer intervened he also attacked him.

31: Fondled and masturbated a male child and committed anal penetration of the child with his finger.

#89: Set fire to his own home with gas while his wife and son were inside, then blamed it on his sister, with whom he was feuding over

settlement of an estate. He called the fire department, then set a second fire.

#57: Shot a perfect stranger on the streets of a major city to rid himself of voices, then returned to the scene and shot him again to make sure he was dead.

#61: Robbed woman of over one hundred dollars by threatening her in the Majik Mart.

#43: Beat another patient's head against the floor causing permanent disfigurement until he was pulled off of him.

#36: Broke into a house, and when he heard the owner returning, shot him to death on the doorstep using his own gun.

#49: Suspected his wife of infidelity, and shot her to death (and has no memory of it).

#81: Picked up a hitch-hiker, threatened her with a knife, and raped her.

#14: Had been drinking and smoking marijuana. Shot his best friend to death with a shotgun at point blank range in his living room over a quarrel about #14's girlfriend and the issue of jealousy.

#83: Believed the victim was a Communist. He shot him two times as he exited the apartment, once as he lay there. Victim rose to go down an alley and he emptied the rest of the gun into him.

#74: Committed armed robbery and stole a gun. Commandeered a car with a woman and her twelve-year old son in it and at gunpoint forced them to help him escape.

#87: Threatened to blow up a girl and her house. He carried a machete around with him, and mace; and attacked police with these at his arrest.

#54: Heroin addict who committed armed robbery of a drug store, then broke into a home to rob owner and assaulted him with a pistol butt.

#9: Attacked two men with a broken bottle at ice cream warehouse. He broke a bottle and threatened to "cut their guts out." Then he tried to attack the two arresting police officers and their backup units.

#73: While being arrested on a loitering and prowling charge, he attacked the two police officers with a knife.

#2: Assaulted police who were trying to arrest him for escaping from the county jail: he had no weapon.

#24: Bought a gun the day of the crime "just to kill someone." Went to boatyard with acquaintances who teased him about having a poor sex life. He fired nine shots at them.

#62: Drove up behind a girl, jumped out of the car, grabbed her and threw her to the ground and attempted to rape her.

#72: During fistfight with his brother, kicked and seriously injured his mother. He was drunk and attacked the police when they came to arrest him.

#7: Was trespassing near a railroad yard when a man with a gun ordered him to leave. The man rushed him, #7 opened fire with a rifle and pistol. Another man in a car pulled up with a gun and #7 fired at him and ran. When he saw a helicopter, he thought it was part of the enemy plot, and fired at it with a rifle.

#76: Cut into line at student cafeteria, got into a shoving match and left. He came back and shoved an employee to obtain a shovel. In cafeteria, hit a girl in the chest as he swung the shovel.

#35: Drove to radio station and opened fire on the people inside due to the station's views on homosexuality.

#15: Attacked stranger with plastic bottle shard, slashing his face as he was changing a tire for a woman. Then slashed the two policemen who came to arrest him.

#25: Kidnapped man who picked him up hitching, then robbed him at gunpoint.

Group II

#53: Kidnapped two teenagers who were on a date, stole the male's car, took girl to abandoned building and raped her, releasing her the next day.

#44: After his job working as a telephone man ended, gave a six-year old girl a ride home from school. Fondled and stripped her, she started crying, he became frightened and strangled her with wire, hiding the body and clothes.

#1: Stabbed acquaintance once with a knife over gambling debt, believing that he had a gun.

#88: Shot man he caught with his wife. Left body for about four hours, returned to get it, drove around the interstate looking for a good place to bury it.

#34: Shot former homosexual lover five times over blackmail material that the victim had on him.

#16: Kidnapped 8-year old boy on bike, raped and strangled him to death.

#28: Knocked on door, and when it was opened struck the woman inside across the face with a gun. Then took her to orange grove and raped her.

#32: After robbing convenience store, kidnapped the clerk, and took her to a lake where he raped her. Going back to the car, he shot her in the head three times.

#50: Believed his wife was leaving him, so he shot her and tried to shoot her mother whom he felt was coming between them.

#65: Killed a woman by stabbing her to death repeatedly.

#63: Robbed victim, then killed him. Also killed partner during the robbery.

#59. While babysitting, beat his four-year old stepson to death with a blunt instrument.

#18: Broke into a house, stole money and when woman caught him, attempted to kill her by beating her severely with a prybar.

#55: Felt homosexual lover was cheating on him, so followed him to post office at 9 AM where he shot him, then held him as he died saying "I love you."

#33: Picked woman up in bar, went drinking at her trailer, she poked him with a fork, so he killed her by stabbing her repeatedly.

#67: Broke into eighty-year old woman's house, stole belongings, waited for her to come home, raped her, then killed her by stabbing her repeatedly with two knives, leaving them in body.

#37: At movie theatre, raped male adult and stole seven dollars.

#82: Kidnapped girl scout from camping trip, held her captive for seven days and raped her repeatedly.

#3: Found his wife cheating on him with another man and shot him.

#51: Attempted to rob two men, pistol-whipped them to scare them, then threatened to shoot them.

- #48: While in act of robbing house, was surprised by the female owner, raped her, then repeatedly stabbed her to death.
- #75: Robbed person at knifepoint of his money.
- #68: Broke into trailer, tied up husband at knifepoint then raped wife while husband watched.
- #42: Raped and beat woman and attempted to kill her. Also attempted to kill another man by repeatedly stabbing him with a sharpened pen.
- #78: Broke into a store and held it up.
- #10: Grabbed woman and threatened to kill her: robbed her by pretending to have weapon.
- #71: Raped prostitute in downtown Miami.
- #17: After leaving a bar, thought a man from the bar was chasing him to rob him, so he shot him.
- #12: Broke into the house of eighty-year old woman, raped and suffocated her.
- #26: Shot wife and three children to death by placing pillow over their heads and shooting them while they slept.

Group III

- #77: Kicked girlfriend to death with his boots, left body at home hanging in bathroom and went to a bar for drinks.
- #47: Had been drinking and fighting earlier, went back to bar for one last drink. Victim saw him and swore at him, they started fighting again, and #47 shot him.
- #70: After high-speed chase, took aim at police who were after him and killed one, wounding others.

#46: Was making advances to his common-law wife at bar, she pulled out a .22 and was accidentally shot by him after rejecting him.

#66: Shot mother-in-law to death while drunk.

#64: Hired two hit men to shoot victim who "knew too much." (other version) Stabbed victim to death who knew too much, disposed of body through his Mafia connections.

#84: After two men molested his girlfriend, kidnapped the men with his pistol, took them to the woods, and shot them.

#8: Robbed three convenience stores; at the third, the clerk knew him so he killed her by emptying six shots into her.

#39: At FSP, victim had told him he would rape him. They found and #39 killed him by stabbing him six times.

#85: Killed his seventy-year old mother by beating her to death with his fist.

#6: Stabbed woman and her eleven-year old son to death, attempted to kill nine- and seven-year old sons to death by stabbing. Total of eighty-seven stab wounds while screaming "die bitch die."

#29: Held knife to throat of female, undressed her, sucked on breasts.

#19: Broke into house and during burglary, raped ninety-year old woman and hit her in the face.

#52: Raped seven year old boy.

#30: Kidnapped and raped one woman, then kidnapped and raped another woman while she was tied to a tree.

#79: Forced a mother and daughter into motel with sawed-off shotgun and raped them both.

#21: Had eleven- and twelve-year old daughters have sex with each other, and then had repeated intercourse with the older.

#56: During a drug deal, he shot dealer who was trying to renege on deal and fled.

#60: Raped a woman while he was a patient at state hospital.

#41: Attempted intercourse with a four-year old boy. Then fondled, had oral sex, masturbated.

#20: During fight, attempted to kill opponent by hitting him in the head with an ax.

#40: Hitched a ride, then robbed and shot driver to death.

#86: Kidnapped woman and her twelve-year old daughter, raped and killed them, then cut them open to feel the hearts.

#58: When neighbors trespassed in his yard, ran inside to get gun and shot neighbor to death with a rifle when he disturbed the stones around a lemon tree in the yard.

#69: Repeatedly held up banks, usually successfully.

#45: Broke into house, repeatedly stabbed mother and daughter, left house but returned to stab daughter again.

#27: Stabbed cellmate five times with knife because he said he would not pay him the five hundred dollars he owed him.

#90: Waited for father to finish work for the day, shot him in the back and neck with sawed-off shotgun, then led police to where he buried the gun.

#22: During robbery of realtor she resisted and he stabbed her thirty-one times with an icepick.

#13: Attacked correctional officers with his fists when officer came through the door to isolation.

Group IV

Control #1: Tried to strangle wife, dragged her by the throat to front yard where he attempted to hit her with an icepick.

Control #2: Picked up a hitch-hiker, drove her to her mother's house where he pulled a gun. He took her money, then drove away.

Control #3: Held up a Majik Mart clerk with a gun, said he would be watching him, and would blow out his brains if he called the police. He then left the store and ran out of gas.

Control #4: Broke into a house where mother and children were all sleeping in the same bed. He shot the mother as she slept but left the children alone.

Control #5: After stealing a car, he attempted to run over police officers; then jumped out of the car and attacked them with fists.

Control #6: With two other men, held up restaurant after hours with guns; multiply-gang-raped clerk-cashier.

Control #7: Pulled gun at Majik Mart and took money. Stayed and shoved clerk around, threatening him with gun saying, "I have been to prison before, I will blow your head off." He then locked him in a storeroom.

Control #8: Held up a hamburger stand with .357 magnum revolver. Left after swearing at clerk. Also accused of raping man in prison.

Control #9: Bought cigarettes from gas station attendant, then hit him in head with a brick, knocking him out. Then took the money from the store.

Control #10: Multiple rapist who requested that the jail director "bring me in a woman."

Control #11: Assaulted and robbed an elderly doctor and his wife, after breaking into their home and stabbing the doctor seven times. Also raped seventy-three year old woman, beating her with his fists and feet leaving bruises over her entire body.

Control #12: Had argument with his wife in the car on a trip. At gas station his wife asked attendant to call the police and they left the station. He saw police lights behind them, panicked, and killed wife by shooting her twice.

Control #13: After drinking at his brother-in-law's home, left angry and went to his estranged wife's house. He burned down the house, kidnapped her, argued with his brother-in-law who had followed him, and shot him in leg with shotgun. He returned to the brother-in-law's house where he announced to the man's wife that he had just killed her husband; he then pointed the gun at his estranged wife's head and asked sister-in-law for money. He then fled. Brother-in-law later died of injuries.

Control #14: While working as maintenance man at Hilton, entered room with passkey and threatened woman with a pipe wrench. He then raped her.

Control #15: While drunk, he attacked an unfamiliar white female he had been following down the street, hitting her several times with a blunt instrument in the head. After she fell he kicked her several times until he was pulled off, then claimed racial prejudice.

Control #16: He and juvenile female committed armed robbery, had high speed chase with police, then crashed the car and she died. He was charged with murder.

Control #17: Held up store with a toy gun.

Control #18: After being warned by police earlier in the day not to harass his ex-wife, he got drunk, threatened to kill her. He then went to her house, saw her in her car, rammed at her with his car.

Control #19: While drunk, had intercourse with his thirteen-year old daughter. Occurred four times over period of weeks.

Control #20: Broke into house with another man and both of them raped a high school teacher and her fifteen-year old daughter repeatedly.

Control #21: As apartment complex rapist, his method of operation was to cock a gun at victim's head and rape her. Multiple victims.

Control #22: Committed two armed robberies using butcher knife. Was threatening and physically assaulted the clerks.

Control #23: Held up drive-in with gun, threatened clerk, fled.

Control #24: Held up man and then physically beat him and banged his head on pavement.

Control #25: Held up stranger with knife in back, asked for money. When man had none, he shot him in back. Also attempted to kill clerk at liquor store with a gun while chasing her into basement.

Control #26: Propositioned unfamiliar girl at a dance. When she would not talk with him, he got his gun and tried to shoot her.

Control #27: Robbed convenience store, manhandled clerk and ripped her shirt.

Control #28: Followed two joggers to a wooded area, kidnapped them, raped both, beat one who tried to escape, had them jog back to apartment.

Control #29: Held up convenience store with sawed-off shotgun, explaining to clerk that he needed the money. As he left store, he saw witnesses in car and attempted to shoot them; he ran and returned fire at witnesses who also had a gun.

Control #30: Broke into a strange house, hit woman with a concrete block wrapped in a towel. Hit her three times, causing scars and skull fracture.

APPENDIX C
HUMAN SUBJECTS CONSENT FORM

You will be taking some psychological tests as part of a research project. This will take about 3-4 hours of your time, in most cases. Some of these tests you may have had before, but we'd like you to go ahead and be as honest and open as you can be in your answers. These test results will in no way influence your stay at this institution. Individual results on the tests will not even be shown to the staff: the testing is strictly for research purposes. In addition, as a protection to you, after all tests are collected on you, your name will be destroyed and replaced by a code number. Therefore, your name serves only to help us collect the data (both testing and demographic) and will play no part in the experiment or any publication thereafter. This is to insure greatest possible privacy to you. You will be taking four tests, all of which will be administered by a trained administrator. Some people find the tests enjoyable, as they are being given to find out how you as an individual see things. Any questions which you have will be answered after all tests are completed. We appreciate your cooperation. •

<u>Subject</u> I authorize the performance upon _____ (subject) of the following psychological procedures: WAIS, MMPI, RORSCHACH, HAND TEST, AND PROJECTIVE DRAWINGS, plus access to biographical information. The above-named tests enable the examiner to gain a perspective on certain modes of perceiving and structuring the world which the subject uses in everyday living. The nature and purpose of this procedure, possible alternative methods of the procedure, any risks involved, have been explained to me verbally and in writing by _____, (name of examiner). I fully understand that the procedure to be performed is experimental and not routine psychological treatment. I also understand that I may not benefit from this procedure. Furthermore, it is agreed that the information gained from this investigation may be used for educational purposes which may include publication. I understand that I may withdraw my consent at any time.	<u>Date, Time</u> _____
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<u>Subject</u> I, the undersigned, have defined and fully explained this psychological procedure to the above subject.	<u>Witness</u> _____ (Examiner)
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APPENDIX D
DEMOGRAPHIC DATA FORM

1. Name and code number
2. Crime
3. Age
4. Race
5. County of jurisdiction
6. Handedness
7. Education
8. Occupation
9. Age at the time of offense
10. Length of incarceration
11. Date of commission of crime
12. Date of admission
13. Relationship to victim
14. ETOH abuse?
15. Judge or jury trial
16. Public or private attorney
17. Adjudication of incompetency?
18. Diagnosis
19. Prior arrest record
20. Medical history (experts and their opinions, prior hospitalizations, medication and treatment history, head trauma, physical disability, seizures?)

APPENDIX F
STATISTICAL ANALYSES

Table 23

MANOVA: Adjudication

Multivariate Tests of Significance (S=3, M=3½, N=52)

Test Name	Value	F	D.F.	Significance
Pillais	.470	1.824	33 324	.005
Hotellings	.645	2.048	33 314	.001
Wilks	.578	1.934	33 313	.002
Toys	.331			

Eigenvalues and Canonical Correlations

Root Number	Eigenvalue	Pct.	Cum. Pct.	Can. Cor.
1	.496	76.8	76.8	.57602
2	.092	14.3	91.2	.29129
3	.056	8.7	100.0	.23138

Dimension Reduction Analysis

Roots	Wilks	Lambda	F	D.F.	Significance
1 to 3	.578	1.934	33	313	.002
2 to 3	.866	.793	20	213	.720
3 to 3	.946	.672	9	107	.732

Variable	F (3, 116)	Significance
IQ Score	1.25	.296
Goldberg Original	1.34	.264
Palo Alto	1.21	.308
Sum C	4.47	.005
F%	1.83	.145
Extended F+%	2.14	.099
M	.17	.914
Heinousness	1.63	.185
Education	.34	.798
Arrests	1.18	.319
Age	1.09	.354

Table 24

Means and Standard Deviations:
Groups 1 vs. 2 (II, III, IV)

Means

Variable	Group 1	Group 2	All
IQ Score	91.1	96.3	95.0
Goldberg Original	64.0	68.5	67.3
Goldberg I	135.2	144.3	142.1
Goldberg II	107.9	111.2	110.4
Drawing	14.6	14.1	14.2
CF	1.1	1.8	1.6
PADS	1.7	1.8	1.8
Sum C	2.7	4.8	4.3
F%	29.2	22.9	24.4
Extended F+%	75.3	81.2	79.7
F+%	66.0	71.2	69.9
A%	47.9	48.9	48.6
8,9,10%	33.6	33.8	33.7
M	1.8	2.0	2.0
Heinousness	1.2	1.7	1.6
Education	10.3	10.7	10.6
Arrests	3.3	5.6	5.0
Age	28.3	27.7	27.8

Standard Deviations

Variable	Group 1	Group 2	All
IQ Score	10.6	13.7	13.0
Goldberg Original	25.4	22.8	23.5
Goldberg I	28.4	36.3	34.5
Goldberg II	21.8	27.4	26.2
Drawing	5.2	5.8	5.7
CF	1.0	1.5	1.4
PADS	.4	.4	.4
Sum C	1.1	1.6	1.5
F%	20.8	17.2	18.2
Extended F+%	15.8	10.8	12.2
F+%	29.2	31.9	31.2
A%	15.1	14.6	14.7
8,9,10%	7.1	8.0	7.8
M	1.9	2.1	2.0
Heinousness	.8	1.0	1.0
Education	2.5	2.5	2.5
Arrests	4.3	8.5	7.6
Age	6.0	9.0	8.3

Table 25
MANOVA: Residence

Multivariate Tests of Significance (S=3, M=3½, N=52)

Test Name	Value	F	D. F.		Significance
Pillais	.656	2.752	33	324	.006
Hotellings	.977	3.100	33	314	.007
Wilks	.452	2.925	33	313	.007
Rois	.406				

Eigenvalues and Canonical Correlations

Root Number	Eigenvalue	Pct.	Cum. Pct.	Can. Cor.
1	.685	70.1	70.1	.63785
2	.203	20.8	91.0	.41156
3	.087	8.9	100.0	.28406

Dimension Reduction Analysis

Roots	Wilks Lambda	F	D. F.		Significance
1 to 3	.452	2.925	33	313	.007
2 to 3	.763	1.537	20	213	.071
3 to 3	.919	1.043	9	107	.411

Variable	F (3,116)	Significance
IQ Score	3.11	.029
Goldberg Original	2.27	.083
Palo Alto	1.11	.347
Sum C	5.25	.002
F%	1.56	.202
Extended F+%	2.91	.038
M	.11	.953
Heinousness	3.57	.016
Education	.84	.477
Arrests	3.28	.023
Age	2.44	.068

Variable: IQ Score

F=3.11 P= 4 .029

Group	Mean	S. D.	S. E.	95% Confidence Int.
Chattahoochee	91.13	10.7	1.9	87.14 to 95.12
FSP	92.14	13.5	2.5	86.89 to 97.39
Close Security	100.00	15.3	2.7	94.47 to 105.52
County Jail	96.43	11.1	2.0	92.28 to 100.58

Table 25--continued

Variable: Sum C
 $F=5.25$ $P= \leq .002$

Group	Mean	S.D.	S.E.	95% Confidence Int.
Chattahoochee	2.73	2.4	.4	1.84 to 3.62
FSP	6.32	4.3	.8	4.63 to 8.00
Close Security	4.62	3.3	.6	3.42 to 5.82
County Jail	3.70	4.0	.7	2.18 to 5.21

Variable: Extended F+
 $F=2.91$ $P= \leq .037$

Group	Mean	S.D.	S.E.	95% Confidence Int.
Chattahoochee	75.33	15.9	2.9	69.40 to 81.25
FSP	78.85	9.4	1.7	75.19 to 82.52
Close Security	84.40	10.4	1.8	80.64 to 88.16
County Jail	79.90	12.0	2.2	75.39 to 84.40

Variable: Heinousness
 $F=3.57$ $P= \leq .016$

Group	Mean	S.D.	S.E.	95% Confidence Int.
Chattahoochee	1.23	.9	.2	.89 to 1.56
FSP	2.07	1.1	.2	1.63 to 2.50
Close Security	1.43	1.0	.2	1.06 to 1.81
County Jail	1.70	1.0	.2	1.30 to 2.09

Variable: Arrests
 $F=3.28$ $P= \leq .023$

Group	Mean	S.D.	S.E.	95% Confidence Int.
Chattahoochee	3.30	4.3	.8	1.69 to 4.90
FSP	8.64	12.9	2.4	3.63 to 13.65
Close Security	3.28	5.5	.9	1.31 to 5.25
County Jail	5.36	4.5	.8	3.68 to 7.04

Table 26

Means and Standard Deviations;
Residence

Means

Variable	Gp. I	Gp. II	Gp. III	Gp. IV	All
IQ Score	91.1	92.1	100.0	96.4	96.0
Goldberg Original	64.0	76.8	67.0	62.2	67.3
Goldberg I	135.2	140.2	147.0	145.6	142.1
Goldberg II	107.9	111.6	104.8	117.6	110.4
Drawing	14.6	13.8	13.4	15.1	14.2
CF	1.1	2.3	1.7	1.4	1.6
PADS	1.7	1.7	1.8	1.9	1.8
Sum C	2.7	6.3	4.6	3.7	4.3
F%	29.2	18.9	24.0	25.4	24.4
F+%	66.0	69.1	77.7	66.2	69.9
Extended F+%	75.3	78.8	84.4	79.9	79.7
A%	47.9	46.5	46.9	53.2	48.6
8,9,10%	33.6	36.3	33.5	31.6	33.7
M	1.8	2.0	2.1	2.1	2.0
Heinousness	1.2	2.1	1.4	1.7	1.6
Education	10.3	10.2	11.0	10.9	10.6
Arrests	3.3	8.6	3.3	5.4	6.1
Age	28.3	26.3	30.8	25.7	27.8

Standard Deviations

Variable	Gp. I	Gp. II	Gp. III	Gp. IV	All
IQ Score	10.6	13.5	15.3	11.1	12.8
Goldberg Original	25.4	22.5	20.8	23.6	23.1
Goldberg I	28.4	33.8	34.6	40.8	34.7
Goldberg II	21.8	25.9	26.6	29.0	26.0
Drawing	5.2	5.6	5.9	5.9	5.7
CF	1.0	1.5	1.3	1.8	1.4
PADS	.4	.4	.4	.4	.4
Sum C	1.1	1.9	1.6	1.5	1.4
F%	20.8	15.5	15.4	20.2	18.2
F+%	29.2	35.2	27.5	32.9	31.2
Extended F+%	15.8	9.4	10.4	12.0	12.2
A%	15.1	11.9	13.9	17.0	14.6
8,9,10%	7.1	6.4	7.5	9.3	7.7
M	1.9	1.9	2.3	2.1	2.1
Heinousness	.9	1.1	1.0	1.0	1.0
Education	2.5	2.4	3.0	1.8	2.5
Arrests	4.3	12.9	5.4	4.4	7.5
Age	6.0	5.7	11.0	8.3	8.1

Table 27

MANOVA:Crime

Multivariate Tests of Significance (S=3, M=3½, N=52)

Test Name	Value	F	D.F.		Significance
Pillais	.448	1.723	33	324	.010
Hotellings	.538	1.707	33	314	.011
Wilks	.612	1.717	33	313	.010

Eigenvalues and Canonical Correlations

Root Number	Eigenvalue	Pct.	Cum. Pct.	Can. Cor.
1	.296	50.0	50.0	.46085
2	.164	30.6	80.6	.37624
3	.103	19.3	100.0	.30684

Dimension Reduction Analysis

Roots	Wilks	Lambda	F	D.F.		Significance
1 to 3	.612	1.717	33	313		.010
2 to 3	.777	1.427	20	213		.112
3 to 3	.905	1.235	9	107		.281

Variable	F (3, 116)	Significance
IQ Score	1.41	.243
Goldberg Original	1.34	.265
Palo Alto	.76	.519
Sum C	4.10	.008
F%	1.30	.278
Extended F+%	1.51	.216
M	.13	.939
Heinousness	5.29	.002
Education	.43	.731
Arrests	.62	.600

Variable: Sum C

F=4.10 P= .008

Crime	Mean	S.D.	S.E.	95% Confidence Int.
Murder	5.55	4.1	.6	4.34 to 6.76
Armed Robbery	3.90	3.5	.8	2.23 to 5.56
Rape	4.33	2.8	.7	2.83 to 5.83
Assault	2.58	2.8	.5	1.51 to 3.65

Table 27--continued

Variable: Heinousness

F=5.29 P= 4.001

Crime	Mean	S.D.	S.E.	95% Confidence Int.
Murder	1.70	1.2	.2	1.36 to 2.04
Armed Robbery	.95	1.0	.2	.48 to 1.41
Rape	2.12	.9	.2	1.74 to 2.50
Assault	1.44	.8	.1	1.13 to 1.76

Table 28

Means and Standard Deviations:
Crime

Means

Variable	Cr.I	Cr.II	Cr.III	Cr.IV	All
IQ Score	97.3	96.8	91.7	92.7	96.0
Goldberg Original	65.4	60.3	71.6	71.9	67.3
Goldberg I	139.8	133.9	150.0	144.4	142.1
Goldberg II	108.1	128.1	109.5	102.5	110.4
Drawing	12.5	16.1	15.7	14.4	14.2
CF	2.0	1.5	1.8	.9	1.6
PADS	1.8	1.7	1.9	1.7	1.8
Sum C	5.6	3.9	4.3	2.7	4.3
F%	22.1	20.7	26.4	29.2	24.4
F+%	72.6	74.4	67.4	64.5	69.9
Extended F+%	79.3	84.5	79.7	76.9	79.7
A%	48.3	50.0	46.0	50.4	48.6
8,9,10%	34.7	32.0	35.6	31.7	33.7
M	1.9	2.1	2.2	1.9	2.0
Heinousness	1.7	.9	2.1	1.4	1.6
Education	10.7	10.7	10.1	10.8	10.6
Arrests	4.6	6.4	6.3	3.9	5.1
Age	29.4	23.9	26.7	29.0	27.8

Standard Deviations

Variable	Cr.I	Cr.II	Cr.III	Cr.IV	All
IQ Score	14.1	16.1	12.8	8.4	13.1
Goldberg Original	21.9	25.2	26.2	22.0	23.4
Goldberg I	28.9	28.7	34.2	45.5	34.6
Goldberg II	23.8	26.7	26.6	24.5	26.0
Drawing	4.6	7.3	5.3	5.7	5.5
CF	1.5	1.4	1.6	.8	1.4
PADS	.4	.3	.4	.5	.4
Sum C	1.2	1.1	1.8	1.5	1.5
F%	14.2	22.6	20.8	18.5	18.2
F+%	29.6	31.8	34.3	31.3	31.3
Extended F+%	11.4	13.0	12.0	13.7	12.4
A%	14.2	17.5	12.6	15.4	14.8
8,9,10%	7.5	5.8	8.6	8.3	7.7
M	2.3	1.5	2.0	2.1	2.1
Heinousness	1.1	.9	.8	.8	1.0
Education	3.0	2.2	2.4	1.6	2.5
Arrests	6.3	6.3	13.2	3.4	7.7
Age	9.6	4.8	6.8	8.3	8.1

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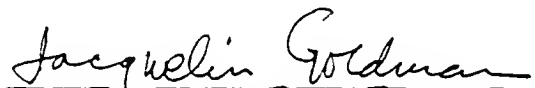
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BIOGRAPHICAL SKETCH

Caryl E. Boehnert was born in Chicago, Illinois, May 29, 1954. Most of her "formative years" were spent in Houston, Texas, where she graduated from Mirabeau B. Lamar High School in 1971. From there she spent two and one half years at Middlebury College in Vermont as a history and sociology major. She transferred in the middle of her junior year to Swarthmore College, a school to which she credits most of her academic education, including a major in psychology. She entered the graduate program in clinical psychology at the University of Florida in Gainesville in 1976. During the period of data collection for this research, she was employed at the Alachua County Corrections Center in the Intake Unit, a facility whose milieu help solidify her interest in forensic psychology. Between 1981 and 1982, she completed an internship at the University of Minnesota and decided that she enjoyed the atmosphere enough to settle in the area. In the fall of 1982, she accepted a half-time position at Hennepin County Court Services, which requires the performance of court-ordered evaluations involving questions of competency to stand trial, sanity, commitment, custody, and juvenile placement. She accepted a second half-time position at that time as a staff psychologist in the out-patient psychology clinic at the University of Minnesota Hospitals.

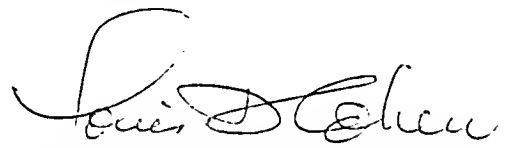
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Jacquelin Goldman, Chairperson
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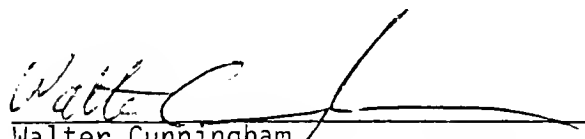
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Richard Swanson
Professor of Psychology


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Professor Emeritus of Clinical
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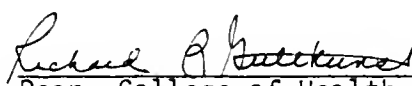

Walter Cunningham
Associate Professor of Psychology

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This dissertation was submitted to the Graduate Faculty of the College of Health Related Professions and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August 1983


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